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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT**

COMPANY: Chemical Lime Company
FACILITY: Nelson Lime Plant
PERMIT #: 1000045
DATE ISSUED: *Proposed on April 18, 2002*
EXPIRY DATE:

ABSTRACT

This Class I permit is issued to Chemical Lime Company/Nelson Lime Plant, the Permittee, for operation of its limestone processing and lime manufacturing plant located approximately six miles east of Peach Springs in Nelson, Yavapai County, Arizona. The limestone processing operation consists of an extended quarry area, a crushing and screening plant, and auxiliary operations. The lime manufacturing operation consists of pre-kiln limestone handling, two lime kilns, post-kiln lime handling, a hydrator, two peak demand generators, truck and rail loadout facilities, and solid fuel handling. The air pollution control equipment applied at the Nelson Lime Plant includes a number of baghouses, two multicyclone dust collectors, a gravel bed, and a Ducon wet scrubber to control particulate matter emissions.

This permit is issued in accordance with Title 49, Chapter 3 of the Arizona Revised Statutes. All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except those incorporated from the Consent Order, Docket No. A-102-98, issued on September 26, 1998 by the Arizona Department of Environmental Quality. The terms and conditions in this permit whose origin is from the Consent Order are state enforceable.

The potential emission rates of the following pollutants are greater than major source thresholds: (i) particulate matter with an aerodynamic diameter less than 10 microns, (ii) sulfur dioxide, (iii) nitrogen oxides, and (iv) carbon monoxide. Therefore, the facility is classified as a major source as defined in A.A.C. R18-2-101(64), and requires a Class I permit pursuant to A.A.C. R18-302(B)(1)(a).

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ATTACHMENT "A": GENERAL PROVISIONS**Air Quality Control Permit No. 1000045
for
Chemical Lime Company, Nelson Lime Plant****I. PERMIT EXPIRATION AND RENEWAL**

[A.R.S. § 49-426.F, A.A.C. R18-2-304(C)(2), 306(A)(1), and 322]

- A. This permit is valid for a period of five years from the date of issuance of the permit.
- B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306(A)(8)(a) and (b), A.R.S. § 49-463, and A.R.S. §49-464]

- A. The Permittee shall comply with all the conditions contained in Attachments "A", "B", "C", "D", and "E" of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act (Act).
- B. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR
TERMINATION FOR CAUSE**

[A.A.C. R18-2-306(A)(8)(c) and 321(A)]

- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances:
 - 1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.
 - 2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Paragraph III(B)(1) above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Paragraph III(B)(1) of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A. The Permittee shall post this permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:
1. Current permit number.
 2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT

[A.A.C. R18-2-326 and 306)(A)(9)]

The Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327]

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

[A.A.C. R18-2-309(2)(a), -309(2)(c), -309(2)(d), -309(5)(d)]

- A. The Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall report the compliance status of the source during the period between January 1st and June 30th of the year. The second certification shall report the compliance status of the source during the period between July 1st and December 31st of the year. Each compliance certification shall be submitted

to the Director within forty-five (45) calendar days following the last day of its certification period.

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;
 2. Identification of the methods or other means used by the Permittee for determining the compliance status with each term and condition during the certification period, and whether the methods or means provide continuous or intermittent data;
 3. The status of compliance with the terms and conditions of this permit for the period covered by the certification, based on the methods or means designated in Paragraph VII(A)(2) above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
 4. For emission units subject to 40 CFR part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;
 5. All instances of deviations from permit requirements reported pursuant to Part XII(B) of this Attachment; and
 6. Other facts that the Director may require to determine the compliance status of the source;
- B. A copy of all compliance certifications shall also be submitted to the EPA Administrator.
- C. If any outstanding compliance schedule exists, a progress report shall be submitted with the semi-annual compliance certifications required in Part VII(A) above.

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-309(3)]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309(4)]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

- A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control

equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. [40 CFR 68.104(C)]

XI. ACCIDENTAL RELEASE PROGRAM

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68. [40 CFR 68]

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting [A.A.C. R18-2-310.01(A) and -310.01(B)]

1. Excess emissions shall be reported as follows:

a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. The report shall be in two parts as specified below:

(1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Sub-Paragraph XII(A)(1)(b) of this Attachment.

(2) Detailed written notification within 72 hours of the notification pursuant to Provision XII(A)(1)(a)((1)) of this Attachment.

b. The report shall contain the following information:

(1) Identity of each stack or other emission point where the excess emissions occurred.

(2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

(3) Date, time and duration or expected duration of the excess emissions.

(4) Identity of the equipment from which the excess emissions emanated.

(5) Nature and cause of such emissions.

- (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.
 - (7) Steps that were or are being taken to limit the excess emissions.
 - (8) If the excess emissions resulted from startup or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of Part XII(A) shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to Paragraph XII(A)(1) of this Attachment.

B. Permit Deviations Reporting

[A.A.C. R18-2-306(A)(5)]

- 1. The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.
- 2. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Part I(B) of Attachment "B" and shall be certified by the responsible official.

C. Emergency Provision

[A.A.C. R18-2-306(E)]

- 1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Provision XII(C)(3) is met.
- 3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;

- c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
- 4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - 5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown

[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
 - b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
 - c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
 - d. Contained in A.A.C. R18-2-715(F); or
 - e. Included in a permit to meet the requirements of A.A.C. R18-2-406(A)(5).
2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable

emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Sub-Paragraph XII(E)(3)(b) below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
 - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
 - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

- (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
 - (7) All emissions monitoring systems were kept in operation if at all practicable; and
 - (8) The Permittee's actions in response to the excess emissions were documented by contemporaneous records.
- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Paragraph XII(D)(2) above.

4. Affirmative Defense for Malfunctions During Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Paragraph XII(D)(2) above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Paragraphs XII(D)(2) or XII(D)(3) above, the Permittee shall demonstrate, through submission of the data and information required by this Part XII(D) and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

- E. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated. [A.R.S. 49-426(I)(5)]

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306(A)(4)]

- A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The name of the company or entity that performed the analyses;
 4. A description of the analytical techniques or methods used;

5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306(A)(5)(a)]

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment “A”.
- B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII Attachment “A”.
- C. Other reports required by Attachment “B” and Attachment “D”.

XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304(G) and 306(A)(8)(e)]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-318, 319 and 320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319);
- C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION

[A.A.C. R18-2-317]

- A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(17).
 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.
 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.
 4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).
 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Parts (A) and (C) of this Section.
- C. For each such change under Parts (A) and (B) of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:
1. When the proposed change will occur.
 2. A description of each such change.
 3. Any change in emissions of regulated air pollutants.
 4. The pollutants emitted subject to the emissions trade, if any.
 5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.
 6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.
 7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. PERFORMANCE TESTING REQUIREMENTS

[A.A.C. R18-2-312]

- A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

B. Operational Conditions During Performance Testing

Performance tests shall be conducted during operation at no less than 90% of the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

- C. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

D. Performance Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with the Arizona Testing Manual. This test plan must include among others identified in the Arizona Testing Manual the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined

using the arithmetic mean of the other two runs. If the Director, or Director's designee, is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

G. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306(A)(8)(d)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE

[A.A.C. R18-2-306(A)(7)]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD

[A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Attachment "B" of this permit. The permit shield shall not apply to any changes made pursuant to Part XVI(B) and Section XVII of this Attachment.

ATTACHMENT "B": SPECIFIC PROVISIONS

**Air Quality Control Permit No. 1000045
For
Chemical Lime Company, Nelson Lime Plant**

{Reading Note: In this Attachment there are many instances where requirements in different parts of the permit have to be cross-referenced. To streamline the cross-referencing procedure, and to reduce ambiguity, the following naming convention has been adopted - Level 1: Section ; Level 2: Part; Level 3: Paragraph; Level 4: Sub-Paragraph; Level 5: Provision; Level 6: Term. For example, requirements for the Limestone Crushing and Screening Plant are in Section III. The requirements for the Kilns 1 and 2 are in Part VI(B). The Emission Standards for the Kilns 1 and 2 are in Paragraph VI(B)(1). The opacity standard for the Kilns 1 and 2 is in Sub-Paragraph VI(B)(1)(a). The requirement to calibrate, maintain, and operate COMS is in Provision VI(B)(3)(a)((1)). When a sixth level appears, it is referred to as a "Term".}

I. GENERAL REQUIREMENTS

- A. Within 30 days of issuance of this Permit, the Permittee shall have on site or on call a person that is certified in EPA Reference Method 9. [A.A.C. R18-2-306(A)(3)(c)]
- B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by this Attachment performed in the same six month period as applies to the compliance certification period. [A.A.C. R18-2-306(A)(5)(a)]
- C. For the purposes of this permit, Control Device Monitoring and Maintenance Procedure shall refer to the following methodology :
 - 1. Recording of differential pressure across the pollution control device. If the device is not equipped with a differential pressure measurement gauge, the Permittee shall install one within 30 days of permit issuance.
 - 2. Verification of the pulse timing sequence of the pollution control device for the baghouses.
 - 3. Inspection according to a plan that contains at least the following elements : (i) inspection of baghouse cleaning system and fan; (ii) internal inspection of the baghouse components including bags, hoppers, and shell; (iii) internal inspection of the wet scrubber for plugging and scaling. The Permittee shall record the various components of the system that have been inspected.
 - 4. Scheduling of any required maintenance that is identified by the inspection. If maintenance is required, the Permittee shall record details of the type of maintenance and the date the maintenance was performed. If maintenance is not required, the Permittee shall record the fact that maintenance is not required.
- D. For the purposes of this permit, Visible Emissions Observation Procedure shall refer to the following methodology:
 - 1. Within 30 days of issuance of this permit, the Permittee shall submit a visual observation plan to be approved by the Director. The observation plan shall identify a central lookout station or multiple observation points, as appropriate, from where the visible emission sources shall be monitored. When multiple observation points are used, all the visible emission sources associated with each observation point shall be specifically identified within the observation plan.

2. A certified Method 9 observer shall conduct a visual survey of visible emissions from the emission sources in accordance with the observation plan, under normal representative operating conditions. The survey shall be conducted at the frequency specified in the permit condition that refers to this procedure. The Permittee shall keep a record of the name of the observer, the date and time on which the observation was made, the location(s) of the observation, and the results of the observation.
 3. If the observer sees a plume from a visible emission source that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall, if practicable, take a six-minute Method 9 observation of the plume.
 - a. If the six-minute opacity of the plume is less than the applicable opacity standard, then the observer shall make a record of the following:
 - (1) Location, date, and time of the observation; and
 - (2) The results of the Method 9 observation.
 - b. If the six-minute opacity of the plume exceeds the applicable opacity standard, then the Permittee shall do the following:
 - (1) Adjust or repair the controls or equipment to reduce opacity to below the applicable opacity standard;
 - (2) Report as an excess emission in accordance with Section XII of Attachment "A" of this permit; and
 - (3) Conduct a six-minute Method 9 observation reading within 48 hours after taking corrective action. The results of this observation, date, time, and location shall be recorded.
 4. Any changes to the observation plan, originally approved by the Director, shall be made only with the prior approval of the Director.
- E. All equipment, facilities, and systems used to achieve compliance with the terms and conditions of this permit shall be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions.
- [Installation Permits Nos. 1046 and 1111]
- F. Where a stack, vent or other outlet at the Permittee's premises, which is not otherwise subject to the Existing Stationary Source Performance Standards, the New Source Performance Standards, or the National Emission Standards for Hazardous Air Pollutants of Title 18, Chapter 2 of the Arizona Administrative Code, is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
- [A.A.C. R18-2-730(G)]
- G. Nothing in this Attachment shall be so construed as to prevent the utilization of measurements from emissions monitoring devices or techniques not designated as performance tests as evidence of

compliance with applicable good maintenance and operating requirements.

[A.A.C. R18-2-312(I)]

H. For the purposes of this Attachment, the following definitions shall be used:

1. "Process source" means the last operation or process which produces an air contaminant resulting from either:
[A.A.C. R18-2-701(22)]

- a. The separation of the air contaminants from the process material, or
- b. The conversion of constituents of the process materials into air contaminants which is not an air pollution abatement operation.

2. "Process weight" means the total weight of all materials introduced into a process source, including fuels, where these contribute to pollution generated by the process.

[A.A.C. R18-2-701(23)]

3. "Process weight rate" shall be determined as follows:
[A.A.C. R18-2-702(E)]

- a. For continuous or long run, steady-state process sources, the process weight rate shall be the total process weight rate for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.
- b. For cyclical or batch process sources, the process weight rate shall be the total process weight rate for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

4. "Fugitive emission" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
[A.A.C. R18-2-101(49)]

I. For the purposes of this Attachment, the following documents are referenced:

1. "Consent Order" refers to the *Consent Order Docket No. A-102-98* issued by the Director to the Permittee, dated September 18, 1998.
2. "Emissions Control Procedure" refers to the *Emissions Control Procedure* submitted to the Director by the Permittee, dated October 28, 1998, as required by the Consent Order.
3. "Dust Control Plan" refers to the *Dust Housekeeping and Fugitive Dust Emissions Control Plan* presented in Attachment "D" of this Permit. The plan was submitted to the Director by the Permittee, dated October 23, 1998, as required by the Consent Order.
4. "Permanent Weigh Scale System" refers to the *Permanent Weigh Scale System* description and schedule submitted to the Director by the Permittee, dated October 28, 1998, as required by the Consent Order.
5. "COMS QA/QC Program" refers to the latest version of the *Opacity Monitor System Quality Assurance Program for Nelson Lime Plant Kilns 1 and 2* submitted to the Director by the Permittee, originally dated October 26, 1998, as required by the Consent Order.

- J. The permit conditions or portions of the permit conditions which are material pursuant to A.A.C. R18-2-331 and A.R.S. §49-464 are indicated by *double underlined and italicized print*.

II. OPEN AREAS, ROADWAYS/STREETS, MATERIAL HANDLING, STORAGE PILES

A. Emission Limits/Standards

1. The Permittee shall not cause, allow or permit visible emissions from open areas, roadways and streets, storage piles or material handling in excess of 40% opacity measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-612]
2. The Permittee shall employ the following reasonable precaution(s), or any other method as proposed by the Permittee and approved by the Director through an appropriate air permit revision mechanism, as appropriate, to prevent excessive amounts of particulate matter from becoming airborne:
 - a. Use dust suppressants or soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, or barring access when constructing, using, altering, repairing, demolishing, clearing, or leveling a building or its appurtenances, a driveway, a parking area, or a vacant lot, or when moving or excavating earth. [A.A.C. R18-2-604(A)]
 - b. Apply temporary paving, dust suppressants, wetting down, or detouring when using, repairing, constructing or reconstructing a roadway. [A.A.C. R18-2-605(A)]
 - c. Apply dust suppressants, wetting, or cover the load when transporting materials likely to give rise to airborne dust. [A.A.C. R18-2-605(B)]
 - d. Use spray bars, wetting, wetting agents, dust suppressants, covering the load, and hoods when crushing, screening, handling, transporting, or conveying materials that is likely to result in significant amounts of airborne dust. [A.A.C. R18-2-606]
 - e. Use chemical stabilization, wetting, or covering when stacking, piling or otherwise storing organic or inorganic dust-producing material. [A.A.C. R18-2-607(A)]
 - f. Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents. [A.A.C. R18-2-607(B)]
 - g. Apply dust suppressants when cleaning any site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means. [A.A.C. R18-2-804(B)]
3. In conjunction with the requirements in Paragraph II(A)(2) of this Attachment, the Permittee shall implement the *Dust Control Plan* referenced in Paragraph I(I)(3) of this Attachment and described in Attachment "D" of the permit, with the specified dust and particulate removal and disposal method and cleanup frequency to:

[Consent Order Conditions III.20, 21, and 23, state enforceable]

- a. Control fugitive dust emissions from the truck dumping operations into the primary crusher feed hopper (such as by the use of shielding and water spray bars and nozzles);
- b. Minimize, to the extent practicable, the fugitive dust emissions from haul roads and open areas (such as by the use of dust suppressants/chemical stabilizers, water sprinkler systems, wind fences/screens, physical stabilization of open areas with vegetation, erosion matting/mulching, physical stabilization of haul roads with asphalt millings, gravel, grizzlies at transition points to pavement, maintenance and operation of a sufficient number and sufficient gallons capacity of dedicated water trucks);
- c. Remove, to the extent practicable, fine dust accumulated at the following areas:
 - (1) On catwalks and railings;
 - (2) On plant buildings;
 - (3) On, around, and under conveyors;
 - (4) Around transfer points; and
 - (5) On and around process equipment.

B. Monitoring, Reporting and Recordkeeping

1. The Permittee shall conduct a Visible Emissions Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor emissions from all activities covered by this Section. [A.A.C. R18-2-306(A)(3)(c)]
2. The Permittee shall maintain records of the dates on which any of the activities listed in Sub-Paragraphs II(A)(2)(a) through (g) of this Attachment were performed and control measures employed. [A.A.C. R18-2-306(A)(3)(c)]
3. In lieu of Paragraph II(B)(2), the Permittee may maintain a Non-Point Source Monitoring Plan as a means of monitoring and recordkeeping for any of the activities listed in Sub-Paragraphs II(A)(2)(a) through (g) of this Attachment. The Non-Point Source Monitoring Plan shall be developed and maintained in compliance with the following conditions: [A.A.C. R18-2-306(A)(3)(c)]
 - a. If the Non-Point Source Monitoring Plan has not been submitted to the Director as part of the Class I application form, the Permittee shall submit a significant revision pursuant to A.A.C. R18-2-320 stating an intent to rely on a Non-Point Source Monitoring Plan. The Non-Point Source Monitoring Plan shall be submitted with the Significant Revision application.
 - b. The Non-Point Source Monitoring Plan shall describe the methods that the Permittee will use to comply with the requirements of this Section. The plan shall contain the following minimum elements of information:
 - (1) Types of control measures employed on an activity-specific basis;
 - (2) Frequency of application of control measure; and
 - (3) A system for documenting variations from the strategy outlined in the Non-Point Source Monitoring Plan.

- c. The Permittee may add any of the methods already listed in Sub-paragraphs II(A)(2)(a) through (g) to the list of control methods initially identified in the Non-Point Source Monitoring Plan. The Permittee may also add any new methods not listed in Sub-paragraphs II(A)(2)(a) through (g) to the list of control methods identified in the Non-Point Source Monitoring Plan on condition that such new methods have been approved by the Director through an appropriate permitting mechanism. In either case, the Permittee shall record the changes to the list of control methods, and provide a notification to the Director within 10 days following the change.
4. In conjunction with Paragraph II(B)(2) or II(B)(3), the Permittee shall maintain all records related to the fugitive dust control and dust housekeeping, as required in the *Dust Control Plan*.

C. Permit Shield

Compliance with the terms of this Section II shall be deemed compliance with A.A.C. R18-2-604(A), A.A.C. R18-2-605(A), A.A.C. R18-2-605(B), A.A.C. R18-2-606, A.A.C. R18-2-607(A), A.A.C. R18-2-607(B), and A.A.C. R18-2-804(B) for the non-point sources identified in the respective permit conditions in this Section. [A.A.C. R18-2-325]

III. LIMESTONE CRUSHING AND SCREENING PLANT

A. Applicability

The conditions of this Section III are applicable to the following process sources listed under Attachment "C" of the Permit, which configure the Limestone Crushing and Screening Plant: Dump Hopper, Apron Feeder 102, Cleanup Belt Conveyor 102B, Grizzly 102A, Jaw Crusher 103, Belt Conveyor 104, Primary Screen 108, Surge Bin 107, Belt Conveyor 235, Belt Conveyor 215, Vibrating Feeders 216-1, 2 and 3, Vibrating Feeder 201, Belt Conveyor 217, Vibrating Screen 218, Gyratory Crusher 219, Belt Conveyor 224, Belt Conveyor 202, Belt Conveyor 222, Belt Conveyor 220, Vibrating Screen 203, Gyratory Crushers 206 (2), Belt Conveyor 204, Belt Conveyor 207, Vibrating Screen 205, Belt Conveyor 208, Belt Conveyor 209, Chat Silo 210, Belt Conveyor 225, Belt Conveyor 226, and Supersacks Fill Operation.

B. Emission Limits/Standards

1. Opacity

- a. The opacity of any plume or effluent from any process source affected under this Section, except Belt Conveyor 226, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60, Appendix A. [A.A.C. R18-2-702(B)]
- b. At all times except during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from any transfer point on the Belt Conveyor 226 any fugitive emissions which exhibit greater than 10 percent opacity and any stack emissions which exhibit greater than 7 percent opacity. Compliance with the opacity standard shall be determined by conducting observations in accordance with EPA

Reference Method 9 in 40 CFR 60, Appendix A.

[40 CFR § 60.672(a)(2) and 672(b), § 60.11(b) and (c)]

2. Particulate Matter

- a. The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from the Limestone Crushing and Screen Plant excluding Belt Conveyor 226, in total quantities in excess of the amounts calculated by one of the following equations: [A.A.C. R18-2-720(B)]

- (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10 P^{0.67}$$

Where E is the maximum allowable particulate emissions in pounds-mass per hour, and P is the process weight rate in tons-mass per hour.

- (2) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in Provision III(B)(2)(a)((1)) above.

- (3) For the purposes of this permit, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-720(D)]

- b. The Permittee shall not cause to be discharged into the atmosphere from any transfer point on the Belt Conveyor 226 any stack emissions which contain particulate matter in excess of 0.05 g/dscm. Emissions in excess of the level of the emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the emission limit. [40 CFR § 60.172(a)(1), § 60.8(c)]

C. Air Pollution Control Requirements

1. The Permittee shall operate the baghouses DC 234, DC 213, DC 240A, and DC 240B for minimizing particulate emissions from the process sources associated with the baghouses. [A.A.C. R18-2-306(A)(2)]
2. The Permittee shall operate the water spray control, sealed control, enclosed control, or underground control at process sources affected under this Section III other than Belt Conveyor 226, as appropriately demonstrated in Figure E-1, Attachment "E" of the Permit for minimizing fugitive emissions from the process sources. [A.A.C. R18-2-306(A)(2)]
3. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate enclosed control and water spray control at the Belt

Conveyor 226, as appropriately demonstrated in Figure E-1, Attachment "E" of the permit,
in a manner consistent with good air pollution control practices for minimizing particulate emissions
from the process sources. [40 CFR § 60.11(d)]

D. Monitoring, Reporting and Recordkeeping

1. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor fugitive emissions from material transfer points at the process sources affected under this Section and stack emissions from the baghouses DC 234, DC 213, DC 240A and DC 240B. [A.A.C. R18-2-306(A)(3)(c)]
2. The Permittee shall, once every month, conduct a Control Device Monitoring and Maintenance Procedure, as defined in Part I(C), for the baghouses DC 234, DC 213, DC 240A and DC 240B. [A.A.C. R18-2-306(A)(3)(c)]
3. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of Belt Conveyor 226; or any malfunction of the enclosed control or water spray control associated with Belt Conveyor 226, as appropriately demonstrated in Figure E-1, Attachment "E" of the Permit. [40 CFR § 60.7(b)]

E. Permit Shield

Compliance with the terms of this Section III shall be deemed compliance with A.A.C. R18-2-702(B), A.A.C. R18-2-720(B), and 40 CFR § 60.672(a) and (b) for the process sources affected under the Section. [A.A.C. R18-2-325]

IV. LIMESTONE KILN FEED SYSTEM

A. Applicability

The conditions of this Section IV are applicable to the following process sources listed under Attachment "C" of the Permit, which configure the Limestone Kiln Feed System: Vibrating Feeders 301 (6), Belt Conveyor 302, Vibrating Screen 328, Weigh Belt Conveyor 329, Stone Bin 304-1, Weigh Belt Conveyor 303A, Stone Bin 304-2, Supersack Load-in Hopper, and Tube Conveyor.

B. Emission Limits/Standards

1. Opacity
 - a. The opacity of any plume or effluent from any process source affected under this Section, except Vibrating Screen 328, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60, Appendix A. [A.A.C. R18-2-702(B)]
 - b. At all times except during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from the Vibrating Screen 328 any fugitive emissions which exhibit greater than 10 percent opacity and any stack emissions which exhibit greater than 7 percent opacity. Compliance with the opacity standard shall

be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A.

[40 CFR § 60.672(a)(2) and 672(b), § 60.11(b) and (c)]

2. Particulate Matter

- a. The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from the Limestone Kiln Feed System excluding Vibrating Screen 328, in total quantities in excess of the amounts calculated by one of the following equations:

- (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10 P^{0.67}$$

Where E is the maximum allowable particulate emissions in pounds-mass per hour, and P is the process weight rate in tons-mass per hour.

- (2) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in Provision IV(B)(2)(a)((1)) above.

- (3) For the purposes of this permit, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-720(D)]

- b. The Permittee shall not cause to be discharged into the atmosphere from the Vibrating Screen 328 any stack emissions which contain particulate matter in excess of 0.05 g/dscm. Emissions in excess of the level of the emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the emission limit. [40 CFR § 60.672(a)(1), § 60.8(c)]

C. Air Pollution Control Requirements

1. The Permittee shall operate the water spray control, sealed control, enclosed control, or underground control at process sources affected under this Section other than Vibrating Screen 328, as appropriately demonstrated in Figures E-2 and E-3, Attachment "E" of the Permit for minimizing fugitive emissions from the process sources.

[A.A.C. R18-2-306(A)(2)]

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the enclosed control at the Vibrating Screen 328, as appropriately demonstrated in Figures E-2 and E-3, Attachment "E" of the Permit, in a manner consistent with good air pollution control practices for minimizing particulate emissions from

the process sources.

[40 CFR § 60.11(d)]

D. Monitoring, Reporting and Recordkeeping

1. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor fugitive emissions from material transfer points at the process sources affected under this Section.

[A.A.C. R18-2-306(A)(3)(c)]

2. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of Vibrating Screen 328; or any malfunction of the enclosed control associated with Vibrating Screen 328, as appropriately demonstrated in Figures E-2 and E-3, Attachment "E" of the Permit.

[40 CFR § 60.7(b)]

3. The Permittee shall measure and record weight rates in tons-mass per hour of the limestone feeds introduced into Kilns 1 and 2, utilizing the permanent weigh scale system installed at the Limestone Kiln Feed System in conjunction with the methodology outlined in the *Permanent Weigh Scale System* description, as referenced in Paragraph I(I)(4) of this Attachment. The scale system shall be maintained within a $\pm 5\%$ accuracy.

[Consent Order Condition III.8]

E. Permit Shield

Compliance with the terms of this Section IV shall be deemed compliance with A.A.C. R18-2-702(B), A.A.C. R18-2-720(B), and 40 CFR § 60.672(a) and (b) for the process sources affected under the Section.

[A.A.C. R18-2-325]

V. SOLID FUEL HANDLING SYSTEM

A. Applicability

The conditions of this Section V are applicable to the following process sources listed under Attachment "C" of the Permit, which configure the Solid Fuel Handling System: Track Hopper, Solid Fuel Hopper, Track Hopper Fuel Bin 503, Feeders 504A and B, Crusher 505, Belt Conveyor 506, Weigh Belt 504C, Bucket Elevator 521, Roll Crusher 522, Belt Conveyor 516, Belt Conveyor 514, Solid Fuel Bin 508, Weigh Feeder 601-1, Screw Conveyor 613-1A, Screw Conveyor 613-1B, Ball Mill 602-1, Classifier 604, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, and Classifier 2-604.

B. Emission Limits/Standards

1. Opacity

- a. The opacity of any plume or effluent from any process source affected under this Section, except Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, and Classifier 2-604, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60, Appendix A.

[A.A.C. R18-2-702(B)]

- b. At all times except during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, or Classifier 2-604, gases which exhibit 20 percent opacity or greater. Compliance with the opacity standard shall be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A. [40 CFR § 60.252(c), § 60.11(b) and (c)]

2. Particulate Matter

The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from the Solid Fuel Handling System in total quantities in excess of the amounts calculated by one of the following equations: [A.A.C. R18-2-716(B)]

- a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10 P^{0.67}$$

Where E is the maximum allowable particulate emissions in pounds-mass per hour, and P is the process weight rate in tons-mass per hour.

- b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in Sub-paragraph V(B)(2)(a) above.

- c. For the purposes of this permit, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-716(D)]

C. Air Pollution Control Requirements

1. The Permittee shall operate the baghouse DC 527 for minimizing particulate emissions from the process sources associated with the baghouse. [A.A.C. R18-2-306(A)(2)]
2. The Permittee shall operate the water spray control, sealed control, enclosed control, underground control, or DC 527 control at process sources affected under this Section other than Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, and Classifier 2-604, as appropriately demonstrated in Figures E-2, E-3 and E-4, Attachment "E" of the Permit, for minimizing particulate emissions from the process sources [A.A.C. R18-2-306(A)(2)]
3. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the sealed control, enclosed control, or DC 527 control at Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, and Classifier 2-604, as appropriately demonstrated in Figures E-3 and E-4, Attachment "E" of the Permit, in a manner consistent with good air pollution control practices for minimizing

particulate emissions from the process sources.

[40 CFR § 60.11(d)]

D. Monitoring, Reporting and Recordkeeping

1. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor fugitive emissions from material transfer points at the process sources affected under this Section and stack emissions from the baghouse DC 527.

[A.A.C. R18-2-306(A)(3)(c)]

2. The Permittee shall, once every month, conduct a Control Device Monitoring and Maintenance Procedure, as defined in Part I(C), for the baghouse DC 527.

[A.A.C. R18-2-306(A)(3)(c)]

3. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of Solid Fuel Bin 517-2 or Ball Mill 602-2; or any malfunction of the enclosed control or sealed control associated with the two process units, as appropriately demonstrated in Figures E-3 and E-4, Attachment "E" of the Permit.

[40 CFR § 60.7(b)]

4. The Permittee shall measure and record weight rates in tons-mass per hour of the solid fuel feeds introduced into Kilns 1 and 2, utilizing the permanent weigh scale system installed on Weigh Feeders 601-1 and 601-2 in accordance with the *Permanent Weigh Scale System* description, as referenced in Paragraph I(I)(4) of this Attachment. The scale system shall be maintained within a $\pm 5\%$ accuracy.

[Consent Order Condition III.8]

E. Permit Shield

Compliance with the terms of this Section V shall be deemed compliance with A.A.C. R18-2-702(B), A.A.C. R18-2-716(B), and 40 CFR § 60.252(c) for the process sources affected under this Section.

VI. KILN 1 SYSTEM/KILN 2 SYSTEM

A. Applicability

The conditions of this Section VI are applicable to the following process sources listed under Attachment "C" of the Permit, which configure Kiln 1 System/Kiln 2 System:

1. Kiln 1 System: Preheater 305, Rotary Kiln 1, Contact Cooler 310-1, Kiln 1 Dust Bin 318-1, Screw Conveyor 313A-1, Screw Conveyor 313A-2, Screw Conveyor 313A-3, Screw Conveyor 313B, Screw Conveyor 316A, Screw Conveyor 316, Screw Conveyor 318, and Bin Elevator 317.
2. Kiln 2 System: Kiln 2 Preheater, Rotary Kiln 2, Contact Cooler 310-2, Kiln 2 Dust Bin 318-2, Screw Conveyor 2-316, Screw Conveyor 2-316A, Screw Conveyor 2-316B, Screw Conveyor 2-316C, Screw Conveyor 2-316D, Screw Conveyor 2-316E, Screw Conveyor 2-316F, Screw Conveyor 2-316G, and Bin Elevator 2-317.

B. Rotary Kilns 1 and 2**1. Emission Limits/Standards****a. Opacity**

The opacity of any plume or effluent from Kilns 1 and 2 stacks shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60, Appendix A.

[A.A.C. R18-2-702(B)]

b. Particulate Matter

The Permittee shall not cause, allow, or permit the discharge into the atmosphere in any one hour, from all stacks of Kilns 1 and 2 combined, particulate matter in excess of the amounts calculated by one of the following equations:

$$(1) \quad E = 4.10 P^{0.67} \text{ when } P \text{ is less than or equal to 30 tons per hour}$$

$$(2) \quad E = 55.0 P^{0.11} - 40 \text{ when } P \text{ is greater than 30 tons per hour}$$

where:

“E” is the maximum allowable particulate emissions in pounds-mass per hour from Kilns 1 and 2 stacks combined, and

“P” is the process weight rate in tons-mass per hour. For the purposes of this permit Kiln 1 and Kiln 2 shall be treated as similar units employing a similar type process. The combined process weight rate through Kilns 1 and 2 shall be used to calculate the maximum allowable particulate emissions from Kilns 1 and 2 stacks combined.

[A.A.C. R18-2-720(B) and 720(D) and Consent Order Condition III.11]

c. Combined Feed Rate Limit

The Permittee may operate Kilns 1 and 2 at a combined feed rate of up to, but no greater than, ten (10) percent above the combined rate at which the most recent performance test required under Sub-paragraph VI(B)(4)(b) was conducted and the test results show compliance with Sub-paragraph VI(B)(1)(b) above, as notified by the Director.

[Consent Order Condition III.14, state enforceable]

d. Fuel Limitation

The Permittee shall use only the following materials as fuel for the rotary kilns under this Section: (i) fuel oil, (ii) coal, (iii) petroleum coke, or (iv) any combination of (i) through (iii).

[A.A.C. R18-2-702(B)(2)]

2. Air Pollution Control Requirements

- a. The Permittee shall operate Kilns 1 and 2 with the appropriate combustion airflow and fuel usage as guided in Part C(1) of the *Emissions Control Procedure* referenced in Paragraph I(I)(2) of this Attachment to maximize kiln efficiencies.

[Consent Order Conditions III.2 and 4, state enforceable]

- b. At all times that Kiln 1 is in operation, the Permittee shall operate both the Gravel Bed Filter 313 and the Multicyclone 319. [A.A.C. R18-2-306(A)(2)]

- (1) The Gravel Bed Filter 313 shall be operated and maintained in a manner consistent with good practice for minimizing particulate emissions and maximizing particulate control efficiency. [Consent Order Condition III.2, state enforceable]
- (2) The static pressure at the filter bed inlet shall be monitored. If the static pressure is outside the target value as guided in Part C(1) of the *Emissions Control Procedure*, the system shall be evaluated and appropriate corrective action be taken, if necessary. [Consent Order Condition III.2, state enforceable]

- c. At all times that Kiln 2 is in operation, the Permittee shall operate both the Kiln 2 negative pressure baghouse and the Multicyclone 2-319. [A.A.C. R18-2-306(A)(2)]

- (1) The Kiln 2 Baghouse shall be operated and maintained in a manner consistent with good practice for minimizing particulate emissions and maximizing particulate control efficiency. [Consent Order Condition III.2, state enforceable]
- (2) The differential pressure across the baghouse shall be monitored. If the differential pressure is outside the target range as guided in Part C(1) of the *Emissions Control Procedure*, the system shall be evaluated and appropriate corrective action be taken, if necessary. [Consent Order Condition III.4, state enforceable]

- d. The Permittee shall inspect and maintain, on daily, weekly, monthly, and semi-annual basis, the Gravel Bed Filter 313 and Kiln 2 Baghouse in accordance with the maintenance and inspection methods and procedures stipulated in Part C(2) of the *Emissions Control Procedure* to ensure the equipment operates properly and to prevent equipment failure. All the periodic maintenance and inspection shall be performed following the appropriate procedural forms listed in the *Emissions Control Procedure* attachments. These forms shall be signed and retained for at least five (5) years at the plant. [Consent Order Conditions III.2 and 4, state enforceable]

3. Monitoring, Reporting and Recordkeeping

a. Visible emissions

- (1) The Permittee shall continue to calibrate, maintain, and operate the two continuous opacity monitoring systems (COMS) installed at Kilns 1 and 2 stacks to monitor and record the opacity of the gases discharged from each kiln. The span of the systems shall be set at 70% opacity. [A.A.C. R18-2-720(F)]
- (2) The COMS under Provision VI(B)(3)(a)((1)) above shall meet 40 CFR 60, Appendix B, "Performance Specification 1 - Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources": [A.A.C. R18-2-A9.3.1.1]
- (a) Apparatus
- (b) Installation Specifications
- (c) Design and Performance Specifications

- (d) Design Specifications Verification Procedure
- (e) Performance Specifications Verification Procedure
- (f) Equations

(3) The COMS under Provision VI(B)(3)(a)((1)) shall meet the following quality assurance requirements:

- (a) Calibration checks [A.A.C. R18-2-A9.4]

The Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure prescribed by the manufacturer.

- (b) Zero and span drift adjustments [A.A.C. R18-2-A9.4]

- i) The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 2% opacity.
- ii) The optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments, except for systems using automatic zero adjustments.
- iii) For systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4% opacity.

- (c) System checks [A.A.C. R18-2-A9.4.3]

The Permittee shall, as minimum procedures, apply a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. All procedures applied shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly.

- (d) Minimum frequency of operation [A.A.C. R18-2-A9.5.1]

Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, the COMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 10-second period.

- (e) Data reduction procedures [A.A.C. R18-2-A9.8]

- i) The Permittee shall reduce all data from the COMS to 6-minute averages. Six-minute opacity averages shall be calculated from 24 or more data points equally spaced over each 6-minute period.
- ii) Data recorded during periods of system breakdowns, repairs, calibration checks,

and zero and span adjustments shall not be included in the data averages computed under the previous paragraph. An arithmetic or integrated average of all data may be used.

- (4) In conjunction with Provision VI(B)(3)(a)((3)) above, the Permittee shall implement the *COMS QA/QC Program* as referenced in Paragraph I(I)(5) of this Attachment. Any revisions made to the Program shall be reviewed and approved by the Director prior to its implementation.

[A.A.C. R18-2-312(H)(3) and Consent Order Condition III.26]

- (5) The Permittee shall record and maintain for a period of at least five (5) years, the following data on a CD-ROM or other available electronic memory capable of preserving such data without degradation for each COMS on each kiln stack:

[A.A.C. R18-2-306(A)(4) and Consent Order Condition III.19]

- (a) Six (6) minute block opacity averages;
- (b) Zero, span, and calibration data.

- (6) By the 30th day of the month following the last day of each quarter, the Permittee shall submit to the Director a written quarterly report summarizing the results of the COMS QA/QC procedures developed pursuant to the *COMS QA/QC Program* as referenced in Paragraph I(I)(5) of this Attachment, total down times of the COMS and the total opacity exceedences as described in 40 CFR 60.7. The last day of each quarter is defined as March 31, June 30, September 30, and December 31. The quarterly report shall include, for each kiln, excess emissions and monitoring systems performance report and-or summary report form as elaborated in the following:

- (a) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and COMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in VI(B)(3)(a)((6))((b)) below need not be submitted unless requested by the Director. The summary report form shall contain the information and be in the format shown in Figure VI-1 unless otherwise specified by the Director.
- (b) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total COMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form described in Term VI(B)(3)(a)((6))((a)) above and the excess emission report shall both be submitted. The excess emission report shall include the following information:
 - i) The magnitude of the six-minute periods during which emissions exceed forty percent as computed in accordance with Term VI(B)(3)(a)((3))((e)), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

- ii) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- iii) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- iv) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

Figure VI-1. Opacity Excess Emission and Monitoring System Performance Summary Report

Reporting period dates: From _____ To _____

Company: _____

Emission Limitation _____

Address: _____

Monitor Manufacturer and Model No. _____

Date of Latest COMS Certification or Audit _____

Process Unit(s) Description: _____

Total source operating time in reporting period ¹ _____

Emission data summary ¹	COMS performance summary ¹
1. Duration of excess emissions in reporting period due to:	1. COMS downtime in reporting period due to:
a. Startup/shutdown	a. Monitor equipment malfunctions
b. Control equipment problems	b. Non-monitor equipment malfunctions
c. Process problems	c. Quality assurance calibration
d. Other known causes	d. Other known causes
e. Unknown causes	e. Unknown causes
2. Total duration of excess emission	2. Total COMS Downtime
3. Total duration of excess emissions x (100) [Total source operating time]. % ²	3. [Total COMS Downtime] x (100) [Total source operating time]. % ²

¹ For opacity, record all times in minutes.² For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total COMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in Term VI(B)(3)(a)((6))(b) shall be submitted.

On a separate page, describe any changes since last quarter in COMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name _____

Signature _____

Title _____

- (7) In addition to the quarterly reporting required under Provision VI(B)(3)(a)((6)) above, the Permittee shall report to the Director all opacity exceedences as determined by EPA Reference Method 9 or COMS, in accordance with Paragraph XII(A)(1) of Attachment "A" of this Permit.

[A.A.C. R18-2-306(A)(3)(c) and Consent Order Condition III.27]

- (8) If the COMS for either kiln records six-minute block opacity averages above the opacity standard established in Sub-paragraph VI(B)(1)(a) in excess of 0.5% of the operating hours of that kiln over an entire calendar quarter, excluding periods of kiln start up and shut down (hereinafter referred to as a "Quarterly Opacity Exceedance" or "QOE"), the Quarterly Opacity Exceedance shall be considered a violation of this Permit. The Permittee shall analyze the COMS records on a weekly basis to determine whether a QOE has occurred.

[Consent Order Condition III.18, state enforceable]

- (a) Upon discovery of a QOE, the Permittee shall immediately reduce by 7% the maximum feed rate to the kiln that caused the QOE.
- (b) Within two (2) days after identifying a QOE, the Permittee shall report to ADEQ in writing the cause of such QOE.
- (c) Within seventy-two (72) hours after identifying a QOE, the Permittee shall make arrangements to conduct performance testing in accordance with the requirements of Paragraph VI(B)(4) hereof. Such performance testing shall be conducted utilizing the previously-approved Test Protocol, within 14 days of the notification provided under term VI(B)(3)(a)((8))(b)), and as soon as a qualified emissions testing firm is available. During any performance test conducted pursuant to this term VI(B)(3)(a)((8))(c)), the Permittee may operate the kiln that caused the QOE up to its maximum feed rate. Once the performance test has been completed, the Permittee shall resume operations of the kiln that caused the QOE at feed rates no higher than that specified in term VI(B)(3)(a)((8))(a)).
- (d) Within thirty (30) days after identifying a QOE, the Permittee shall submit to the Director for approval an opacity compliance plan (OCP) for the operation of the kiln that caused the QOE to achieve compliance with the opacity quarterly performance standard described in this Provision VI(B)(3)(a)((8)). The OCP shall identify:
- i) The cause of the QOE;
 - ii) Short term corrective actions to be implemented within 30 days; and
 - iii) Long term corrective actions to be implemented within six (6) months.
- (e) Upon written approval by the Director, the Permittee shall immediately implement the OCP.
- (f) The Permittee may resume operations of the kiln that caused the QOE at its maximum feed rate once the following conditions are satisfied:

- i) The last performance test conducted pursuant to VI(B)(3)(a)((8))((c)) shows Kilns 1 and 2 to be in compliance with the applicable process weight rate equation defined at Sub-paragraph VI(B)(1)(b), and
- ii) The kiln that caused the QOE has operated during the most recent calendar quarter in compliance with the opacity performance standard described in this Provision VI(B)(3)(a)((8)).

b. Particulate matter

- (1) The Permittee shall evaluate, on a 3-hr rolling average, opacity measurements from the Kiln 1 and Kiln 2 continuous opacity monitoring systems prescribed under Provision VI(B)(3)(a)((1)). If the 3-hr rolling average opacity exceeds 25 percent at Kiln 1 or 10 percent at Kiln 2, then the Permittee shall initiate investigation of the control equipment of the relevant kiln within 24 hours of the first discovery of the high opacity incident for possible corrective action, using the appropriate Trouble Shooting guide provided by the manufacturer as given in Attachments F and G of the *Emissions Control Procedure* referenced in Paragraph I(I)(2) of this Attachment. If corrective action is required, the Permittee shall proceed to implement such corrective action as soon as practicable in order to minimize possible exceedances of the particulate standard established in Sub-Paragraph VI(B)(1)(b) of this Attachment. If the 3-hr rolling average opacity remains above 25 percent at Kiln 1 or 10 percent at Kiln 2 for consecutive 72 hours from the first discovery of the high opacity incident, the Permittee shall submit a compliance schedule to the Director in accordance with ~~Paragraph D-306(A)(3)(c) of the Attachment~~ [A.C. R18-2-306(A)(3)(c)]
- (2) The Permittee shall log in ink or in electronic format and maintain a record of 3-hr opacity measurements performed in accordance with Provision VI(B)(3)(b)((1)) above and any corrective actions taken. A record of corrective actions taken shall include the date and time that the 3-hr rolling average opacity exceeded 25 percent at Kiln 1 or 10 percent at Kiln 2 and the date and time corrective action, if any, was completed. [A.C. R18-2-306(A)(3)(c)]

c. Combined Feed Rate

The Permittee shall monitor and record the combined kiln feed rate in tons per hour using the permanent weigh scale systems described in Paragraphs IV(D)(3) and V(D)(4) of this Attachment. The Permittee shall include in the semiannual monitoring activities report described in Part I(B) of this Attachment, the combined feed rate exceeding its limit set forth in Sub-paragraph VI(B)(1)(c), and the date and time when this incident occurred. [A.C. R18-2-306(A)(3)(c)]

d. Fuel Usage

The Permittee shall, on a daily basis, record the type and amount of solid fuel used by the kilns and whether or not fuel oil was used by the kilns, and include this record in the semiannual monitoring activities report described in Part I(B) of this Attachment. [A.C. R18-2-306(A)(3)(c)]

4. Performance Testing

a. Visible emissions

- (1) The Permittee shall conduct a visible emission observation within one (1) hour, conditions permitting, whenever any of the following occur for a period in excess of four (4) hours: low scrubber media, scrubber media overload, process equipment startup and shutdown, process equipment upsets or malfunctions that may cause increased particulate emissions, and periods when the COMS required under Sub-paragraph VI(B)(3)(a) are down for maintenance or when the COMS shutters are closed for any reason. Additional Reference Method 9 tests shall be performed at a frequency of every two (2) hours or less, conditions permitting, until the event terminates, if the period of any of the listed events exceeds six (6) hours. [Consent Order Condition III.28, state enforceable]
- (2) Except as provided in Sub-paragraph VI(B)(4)(c), the Permittee shall nonetheless conduct a visible emission observation at least once per year at Kilns 1 and 2 stacks to measure the opacity of emissions from each kiln stack. The observation shall be conducted while firing solid fuel (coal/coke) in both kilns, except as provided in Sub-paragraph VI(B)(4)(d). [A.A.C. R18-2-306(A)(3)(c)]
- (3) The Permittee shall use EPA Reference Method 9 listed in 40 CFR 60, Appendix A to conduct visible emission observations under this Part VI(B).

b. Particulate matter [A.A.C. R18-2-306(A)(3)(c) and 720(H), Consent Order Conditions III.9, 11, 16 and 17]

Except as provided in Sub-paragraph VI(B)(4)(c), the Permittee shall conduct, at least once per year, a performance test for the emissions of particulate matter from all stacks serving Kilns 1 and 2, demonstrating compliance with the combined maximum particulate matter emissions limit in Sub-paragraph VI(B)(1)(b).

- (1) All kiln exhaust stacks shall be tested simultaneously.
- (2) The performance test shall be conducted while firing solid fuel (coal/coke) in both kilns, except as provided in Sub-paragraph VI(B)(4)(d).
- (3) The process weight rate used for the equations in Sub-paragraph VI(B)(1)(b) shall be the weight of all process feed materials (limestone, fuels, any other added materials) introduced into both kilns, as measured with the permanent weigh scale systems described in Paragraphs IV(D)(3) and V(D)(4) of this Attachment.
- (4) The following reference methods in 40 CFR 60, Appendix A shall be used in the testing:
 - (a) Method 1 for sample and velocity traverses;
 - (b) Method 2 for velocity and volumetric flow rate;
 - (c) Method 3 for gas analysis;
 - (d) Method 4 for stack gas moisture; and
 - (e) Method 5 for the measurement of particulate matter. For this method, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Director.

- (5) The test results shall reflect the average of three valid test runs.
 - (6) If the test results show a failure, the Permittee, upon receipt of the Director's notification of a failed performance test, shall
 - (a) Immediately reduce the combined feed rate by no less than 7% below the combined feed rate at which the performance test was conducted; and
 - (b) Conduct another performance test within fourteen (14) calendar days after the date of the notification.
 - (7) In the event the results of the second test also show a failure, the Permittee shall, within thirty (30) days after receipt of notification from the Director of a failed performance test, submit for the Director's approval a compliance plan for operation of Kilns 1 and 2 in compliance with the particulate emissions limit required under Sub-paragraph VI(B)(1)(b). The compliance plan shall include steps for immediate implementation to bring Kilns 1 and 2 into compliance with the particulate emissions limit. Within sixty (60) days after implementation of the approved compliance plan, the Permittee shall conduct and complete a third performance test, demonstrating compliance with the particulate emissions limit.
- c. The Permittee may, in any calendar year, be exempted from performing the stack testing described in Provision VI(B)(4)(a)((2)) and Sub-paragraph VI(B)(4)(b) for either kiln if that kiln in that calendar year has operated for less than: (i) 30 days per year continuous operation, and (ii) 60 days per year cumulative operation.
- [A.A.C. R18-2-306(A)(3)(c)]
- d. If solid fuel is not the typical fuel being used in Kilns 1 and 2, the Permittee may use the typical fuel while conducting the performance tests. For the purposes of this Paragraph VI(B)(4), a fuel shall be deemed to be the typical fuel if it is used for greater than: (i) 30 days per year continuous operation, or (ii) 60 days per year cumulative operation. [A.A.C. R18-2-306(A)(3)(c)]

5. Permit Shield

Compliance with the terms of this Part VI(B) shall be deemed compliance with A.A.C. R18-2-702(B), 720(B), and 720(F) for Kilns 1 and 2.

[A.A.C. R18-2-325]

C. Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321

1. Emission Limits/Standards

a. Opacity

The opacity of any plume or effluent from the stacks at Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321 shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A.

[A.A.C. R18-2-702(B)]

b. Particulate matter

[A.A.C. R18-2-730(A)(1)]

The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from stacks at Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321 in total quantities in excess of the amounts calculated by one of the following equations:

- (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10 P^{0.67}$$

Where E is the maximum allowable particulate emissions in pounds-mass per hour, and P is the process weight rate in tons-mass per hour.

- (2) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in Provision VI(C)(1)(b)((1)) above.

2. Air Pollution Control Requirements

The Permittee shall operate the baghouses DC 1-321 and DC 2-321 on Dust Bins 1-318 and 2-318 for minimizing particulate emissions from the dust bins.

[A.A.C. R18-2-306(A)(2)]

3. Monitoring, Reporting and Recordkeeping

- a. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from DC 1-321 and DC 2-321.

[A.A.C. R18-2-306(A)(3)(c)]

- b. The Permittee shall, once every month, conduct a Control Device Monitoring and Maintenance Procedure, as defined in Part I(C), for the control devices DC 1-321 and DC 2-321.

[A.A.C. R18-2-306(A)(3)(c)]

4. Permit Shield

Compliance with the terms of this Part VI(C) shall be deemed compliance with A.A.C. R18-2-702(B) and A.A.C. R18-2-730(A)(1) for Dust Bins 1-318 and 2-318.

[A.A.C. R18-2-325]

D. Other Identifiable Emission Points at the Kilns 1 and 2 Systems

1. Emission Limits/Standards

The opacity of any other identifiable emission point or plume from the affected process sources as defined in Part VI(A), which could not pass through a stack, chimney, vent, or other functionally

equivalent opening, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A. In applying this standard, any plumes from material transfer points shall be considered identifiable. [A.A.C. R18-2-702(B)]

2. Air Pollution Control Requirements

The Permittee shall operate the sealed control or enclosed control at the material transfer points affected under this Part VI(D), as appropriately demonstrated in Figures E-2 and E-3, Attachment "E" of this Permit, for minimizing fugitive emissions.

[A.A.C. R18-2-306(A)(2)]

3. Monitoring, Reporting, Recordkeeping

The Permittee shall conduct a Visible Emissions Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from all identifiable emission points under this Part VI(D). [A.A.C. R18-2-306(A)(3)(c)]

4. Permit Shield

Compliance with the terms of this Part VI(D) shall be deemed compliance with A.A.C. R18-2-702(B) for the identifiable emission points of this Part VI(D). [A.A.C. R18-2-325]

VII. FRONT LIME HANDLING SYSTEM AND BACK LIME HANDLING SYSTEM

A. Applicability

The conditions of this Section VII are applicable to the following affected process sources listed under Attachment "C" of this Permit, which configure the Front Lime Handling System (FLHS) and Back Lime Handling System (BLHS):

1. FLHS: Vibrating Feeders 340A, B, C, D (4 Feeders), Vibrating Feeder 2-311, Conveyor 411, Apron Conveyor 420, Apron Conveyor 421, Screw Conveyor 413, Roll Crusher 422, Bucket Elevator 423, Screen 432, Undersize Lime Hopper, Hammermill 422, Screw Conveyor 428, Bucket Elevator 424-1, Bucket Elevator 424-2, Bucket Elevator 424-C, Screw 425, Screw 426, Screw 427, Screw Conveyor 471, Screw Conveyor 470, Product Silo 1A (428-1), Product Silo 2A (428-2), Product Silo 3A (428-3), Vibrating Feeder 443-1, Vibrating Feeder 433-1 with Screen Cloth, Vibrating Feeder 443-2, Vibrating Feeder 433-2, Vibrating Feeder 443-3, Vibrating Feeder 433-3, Screw Conveyor 441, Screw Conveyor 461, Dust Recovery Bin, Screw Conveyor 466, Screw Conveyor 465, Belt Conveyor 435, Belt Conveyor 434, and Screw Conveyor 444
2. BLHS: Rail Car Off-Load Hopper, Screw Conveyor 412, Belt Conveyor 401, Bucket Elevator 403, Screw Conveyor 443, Roll Crusher 444, Screw Conveyor 445, Bucket Elevator 446, Screen 404, Hammermill 405, Screw Conveyor 447, Screw Conveyor 411, Bucket Elevator 406 E, W (2 elevators), Screw Conveyor 408, Screw Conveyor 408A, Screw Conveyor 408B, Screw Conveyor 408C, Hammermill 402-2, Product Silo 1, Product Silo 2, Product Silo 3, Product Silo 4, Product Silo 5, Screw Conveyor 414-2, and Belt Conveyor 402

B. FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414**1. Emission Limits/Standards****a. Opacity**

The opacity of any plume or effluent from stacks at FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414 shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A.

[A.A.C. R18-2-702(B)]

b. Particulate Matter

[A.A.C. R18-2-730(A)(1) and 730(B)]

The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from stacks at FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414 in total quantities in excess of the amounts calculated by one of the following equations:

- (1) For process sources having a process weight rate of 30 tons per hour or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10 P^{0.67}$$

Where E is the maximum allowable particulate emissions in pounds-mass per hour, and P is the process weight rate in tons-mass per hour.

- (2) For process weight rate greater than 30 tons per hour, the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in VII(B)(1)(b)((1)) above.

- (3) For the purposes of this Sub-paragraph VII(B)(1)(b), the total process weight rate from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
- (4) The maximum allowable particulate emissions set forth in VII(B)(1)(b)((1)) or VII(B)(1)(b)((2)) above shall apply to each individual stack, provided that each stack does not control similar sources.

2. Air Pollution Control Requirements

- a. The Permittee shall operate FLHS Dust Collectors 430, 437A, 437B, 437C, 437D, 437E, 437F, 419-5, 452, and 762-1 and BLHS Dust Collector 414 for minimizing particulate emissions from the process sources associated with the dust collectors.

[A.A.C. R18-2-306(A)(2)]

- b. The Permittee shall, when loading lime products to trucks or railcars, operate the Retractable Bulk Loading Spout in conjunction with the respective baghouse to minimize particulate matter emissions from the loading operation.

[A.A.C. R18-2-306(A)(2)]

3. Monitoring, Reporting and Recordkeeping

- a. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor emissions from FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414 stacks.

[A.A.C. R18-2-306(A)(3)(c)]

- b. The Permittee shall, once every month, conduct a Control Device Monitoring and Maintenance Procedure, as defined in Part I(C) of this Attachment, for the control devices FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414.

[A.A.C. R18-2-306(A)(3)(c)]

4. Permit Shield

Compliance with the terms of this Part VII(B) shall be deemed compliance with A.A.C. R18-2-702(B) and A.A.C. R18-2-730(A)(1) for the stack emission sources affected under this Section VII.

[A.A.C. R18-2-325]

C. Other Identifiable Emission Points at FLHS and BLHS

1. Emission Limits/Standards

The opacity of any other identifiable emission point or plume from the process sources affected under this Section VII, that could not pass through a stack, chimney, vent, or other functionally equivalent opening, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A. In applying this standard, any plumes from material transfer points shall be considered identifiable.

[A.A.C. R18-2-702(B)]

2. Air Pollution Control Requirements

The Permittee shall operate the sealed control, enclosed control, or control devices FLHS/DC 430, DC 437A-F, DC 419-5, DC 452 and DC 762-1 and BLHS/DC 414 at the process sources affected under this Section VII, as appropriately demonstrated in Figures E-5 and E-6, Attachment "E" of this Permit, for minimizing fugitive emissions.

[A.A.C. R18-2-306(A)(2)]

3. Monitoring, Reporting, Recordkeeping

The Permittee shall conduct a Visible Emissions Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from all identifiable emission points at the process sources under this Section VII other than the stack emissions described in ~~Part VII(B)~~ ~~Part VII(B)~~ 2-306(A)(3)(c)]

4. Permit Shield

Compliance with the terms of this Part VII(C) shall be deemed compliance with A.A.C. R18-2-702(B) for the identifiable emission points under this Section VII other than the stack emission sources described in Part VII(B). [A.A.C. R18-2-325]

VIII. HYDRATOR

A. Applicability

The conditions of this Section VIII are applicable to the following affected process sources listed under Attachment "C" of this Permit, which configure the Hydrator: Screw Conveyor 701, Screw Conveyor 702, Quicklime Surge Bin 703, Quicklime Belt Conveyor 704, 4W Pulverizer 706, Screw Conveyor 707, Pug Mill 708, Seasoning Chamber 710, Screw Conveyor 712, Bucket Elevator 719, Air Separator 715, Hammermill 717, Screw Conveyor 718, Bucket Elevator 713, Hydrated Lime Silo 6, Pilot System Storage Bin 1, Pilot System Screw Conveyor 1, Vibrating Mill/Seasoning Chamber (Pilot System), Pilot System Screw Conveyor 2, and Pilot System Storage Bin 2.

B. DF 711, DC 714, and DC 721

1. Emission Limits/Standards

a. Opacity

The opacity of any plume or effluent from DF 711, DC 714, and DC 721 stacks shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60. Appendix A-702(B)]

b. Particulate Matter

- (1) The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from DF 711, DC 714, and DC 721 stacks in total quantities in excess of the maximum allowable emissions calculated by the following equation [A.A.C. R18-2-306.01(B)(1)]

$$E = 4.10 P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour

- (2) The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from the DF 711 stack in total quantities in excess of 5.71 pounds-mass per hour.

[I.P. No. 65011 Condition B and A.A.C. R18-2-306.01(A)]

2. Air Pollution Control Requirements

- a. The Permittee shall operate DF 711, DC 714, and DC 721 for minimizing particulate emissions from the process sources associated with the control devices.

[A.A.C. R18-2-306(A)(2)]

- b. The Permittee shall, when loading hydrate lime products to trucks or railcars, operate the Retractable Bulk Loading Spout in conjunction with the respective baghouse to minimize particulate matter emissions from the loading operation.

[A.A.C. R18-2-306(A)(2)]

- c. The emissions from the Pilot System Vibrating Mill/Seasoning Chamber shall be vented to DF711.

[Permit Revision No. 1000988, Condition I(B)]

- d. The emissions from the Pilot System Storage Bins 1 and 2 shall be vented to the fabric filters mounted on the top of each bin. The Permittee shall maintain and operate the two fabric filters in accordance with manufacturer's specifications.

[Permit Revision No. 1000988, Condition II(B)]

3. Monitoring, Reporting and Recordkeeping

- a. The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from DF 711, DC 714, and DC 721 stacks.

[A.A.C. R18-2-306(A)(3)(c)]

- b. The Permittee shall, once every month, conduct a Control Device Monitoring and Maintenance Procedure, as defined in Part I(C), for the control devices DF 711, DC 714, and DC 721.

[A.A.C. R18-2-306(A)(3)(c)]

4. Performance Testing

[I.P. No. 65011 Condition C]

The Permittee shall conduct, at least once during the permit term, performance tests for opacity and particulate matter emissions from the Hydrator stacks in accordance with the general requirements outlined under Section XVIII, Attachment "A" of this Permit, and the following test methods and procedures:

[A.A.C. R18-2-720(H)]

- a. The reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with Paragraph VIII(B)(1) as follows:

- (1) Method 5 for the measurement of particulate matter;
- (2) Method 1 for sample and velocity traverses;
- (3) Method 2 for velocity and volumetric flow rate;
- (4) Method 3 for gas analysis;
- (5) Method 4 for stack gas moisture;
- (6) Method 9 for visible emissions.

- b. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Director.

- c. Because of the high moisture content of the exhaust gases from the hydrators, in the range of 40 to 85% by volume, the Method 5 sample train may be modified to include a calibrated orifice

immediately following the sample nozzle when testing lime hydrators. In this configuration, the sampling rate necessary for maintaining isokinetic conditions can be directly related to exhaust gas velocity without a correction for moisture content.

5. Permit Shield

Compliance with the terms of this Part VIII(B) shall be deemed compliance with A.A.C. R18-2-702(B) and 720(B)(1) and with conditions of the Installation Permit No. 65011 for the stack emission sources under this Section VIII. [A.A.C. R18-2-325]

C. Other Identifiable Emission Points at the Hydrator

1. Emission Limits/Standards

The opacity of any other identifiable emission point or plume from the process sources affected under this Section VIII, that could not pass through a stack, chimney, vent, or other functionally equivalent opening, shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A. In applying this standard, any plumes from material transfer points shall be considered identifiable. [A.A.C. R18-2-702(B)]

2. Air Pollution Control Requirements

The Permittee shall operate the sealed control, enclosed control, or control devices DF 711, DC 714, and DC 721 at the material transfer points affected under this Section VIII, as appropriately demonstrated in Figure E-7, Attachment "E" of this Permit for minimizing fugitive emissions. [A.A.C. R18-2-306(A)(2)]

3. Monitoring, Reporting, Recordkeeping

The Permittee shall conduct a Visible Emissions Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from all identifiable emission points under this Section VIII other than the stack emissions described in Part VIII(B).

[A.A.C. R18-2-306(A)(3)(c)]

4. Permit Shield

Compliance with the terms of this Part VIII(C) shall be deemed compliance with A.A.C. R18-2-702(B) for the identifiable emission points under this Section VIII other than the stack emission sources described in Part VIII(B). [A.A.C. R18-2-325]

IX. MISCELLANEOUS DROP POINTS FROM DUST BINS AND CONVEYORS

A. Applicability

This Section contains permit conditions for drop points into trucks and railcars, and onto the ground,

from dust bins and conveyors, that have not already been addressed by Sections II, III, IV, V, VI, VII, or VIII of this Attachment.

B. Emission Limits/Standards

The opacity of any plume or effluent from any drop point shall not exceed 40 percent, as determined by EPA Reference Method 9 in 40 CFR 60 Appendix A. [A.A.C. R18-2-702(B)]

C. Air Pollution Control Requirements

The Permittee shall operate loading sleeves or enclosures to control particulate emissions from drop points. [R18-2-306(A)(2)]

D. Monitoring, Reporting and Recordkeeping

The Permittee shall conduct a Visible Emission Observation Procedure, as defined in Part I(D) of this Attachment, once every two weeks to monitor emissions from drop points.

[A.A.C. R18-2-306(A)(3)(c)]

X. DIESEL GENERATORS

A. Applicability

The conditions of this Section X are applicable to the North Electric Generator, South Electric Generator, and Portable Electric Generator listed under Attachment "C" of this Permit.

B. Emission Limits/Standards

1. Opacity [A.A.C. R18-2-719(E)]

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any generator sets affected under this Section X, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity, measured in accordance with EPA Reference Method 9. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

2. Particulate Matter [A.A.C. R18-2-719(B) and 719(C)(1)]

The Permittee shall not cause or allow to be discharged into the atmosphere from the generator stacks affected under this Section X, particulate matter in excess of the amount calculated by the following equation and rounded off to two decimal points:

$$E = 1.02 Q^{0.769}$$

where:

E = The maximum allowable particulate emissions rate in pounds-mass per hour.

Q = The heat input in million Btu per hour. For the purposes of this condition, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass

through a stack or other outlet. The total heat input of all operating fuel-burning units at a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

3. Sulfur Dioxide

The Permittee shall not cause, allow, or permit emissions of more than 1.0 pound of sulfur dioxide per million Btu heat input from each generator set affected under this Section X. [A.A.C. R18-2-719(F)]

4. Nitrogen Oxides

The Permittee shall not cause or allow to be discharged into the atmosphere from the North or South Generator set each, any gases which contain nitrogen oxides (NO_x) in excess of 44.8 pounds per hour and 19.6 tons per year. Any average of three EPA Method 7 runs during which the average NO_x emissions exceed this limit shall constitute an excess NO_x emission. [A.A.C. R18-2-719(G)]

5. Fuel Limitation

a. The Permittee shall burn only No. 2 diesel fuel in the generator sets affected under this Section X; [I.P. No. 1226, Att. "B", Condition V]

b. The diesel fuel shall contain less than 0.90% by weight of sulfur; [A.A.C. R18-2-701(16) and 719(H)]

c. The total amount of diesel fuel consumed in the North and South Generator sets combined shall not exceed 164 gallons in any one (1) hour and 143,500 gallons during any calendar year. [I.P. No. 1226, Att. "B", Condition VI]

6. Hours of Operation

The operating hours of the North or South Generator set each shall not exceed 875 hours per year. [I.P. No. 1226, Att. "B", Condition VII]

C. Monitoring, Reporting and Recordkeeping

1. The Permittee shall conduct a Visible Emissions Observation Procedure, as defined in Part I(D), once every two weeks to monitor emissions from stacks of the Generator sets affected under this Section X. [A.A.C. R18-2-306(A)(3)(c)]

2. The Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include: [A.A.C. R18-2-719(I)]

- The heating value (Btu per gallon fuel);
- The density of the fuel oil (lbs per gallon);
- The sulfur content (sulfur weight percentage);
- The method used to determine the sulfur content of the fuel oil;

3. The Permittee shall use the following equation to perform sulfur dioxide emission calculations for each shipment. The Permittee shall maintain a record of these calculations. [A.A.C. R18-2-719(I)]

$$\text{SO}_2 \text{ (lb/MMBtu)} = 2.0 \times [(\text{Weight percentage of sulfur}/100) \times \text{Density (lbs/gal)}] / [(\text{Heating value (Btu/gal)}) \times (1 \text{ MMBtu}/1,000,000 \text{ Btu})]$$

4. The Permittee shall report to the Director any daily period during which sulfur content of the fuel oil being fired in the generator sets exceeds 0.8 percent. For this reporting purpose, if the sulfur content is not already available, the Permittee shall use ASTM Method D-129-91 (Test Method for Sulfur in Petroleum Products) (General Bomb Method) to determine the sulfur content of the fuel oil being fired. [A.A.C. R18-2-719(J) and 719(K)(2)(a)]
5. The Permittee shall maintain records of the diesel fuel feed rate to the North and South Generator sets in gallons per hour and gallons per year. [I.P. No. 1226, Att. "B", Condition VI]
6. The Permittee shall maintain daily records of the dates and hours of operation of the North or South Generator set. [I.P. No. 1226, Att. "B", Condition VII]

D. Performance Testing

The Permittee shall conduct, at least once during the permit term, performance tests for nitrogen oxides exhausted from stacks of the North and South Generator sets, using EPA Reference Method 7 listed in 40 CFR 60, Appendix A. All performance tests shall be conducted while firing diesel fuel at the maximum operating capacity of the unit being tested. The Permittee shall follow the procedural requirements for performance testing outlined under Section XVIII, Attachment 2A, of this Permit on IV]

E. Permit Shield

Compliance with the terms of this Section X shall be deemed compliance with A.A.C. R18-2-719(B), 719(C)(1), 719(E), 719(F), 719(H), 719(I) and 719(J), and conditions stipulated in Installation Permit No. 1226, Attachment "B" for the generator sets affected under the Section.

[A.A.C. R18-2-325]

XI. FUEL STORAGE TANKS

A. Gasoline Storage Tank 11 (8,000 Gallon)

1. Control Device Standards [A.A.C. R18-2-710(B) through (D)]
 - a. The Gasoline Storage Tank 11 of this Part XI(A) shall be equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions.
 - b. All facilities for dock loading of gasoline shall provide for submerged filling or acceptable equivalent for control of hydrocarbon emissions.
 - c. All pumps and compressors associated with Tank 11 which handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent the release of organic contaminants into the atmosphere.

2. Recordkeeping Requirements

[A.A.C. R18-2-710(E)]

- a. The Permittee shall for Tank 11 maintain a file of each type of gasoline stored, of the typical Reid vapor pressure of each type of gasoline stored and of dates of storage. Dates on which the storage vessel is empty shall be shown.
- b. The Permittee shall for Tank 11 determine and record the average monthly storage temperature and true vapor pressure of the gasoline stored at such temperature if either:
 - (1) The gasoline has a true vapor pressure, as stored, greater than 26 mm Hg (0.5 psia) but less than 78 mm Hg (1.5 psia) and is stored in a storage vessel other than one equipped with a floating roof, a vapor recovery system or their equivalents; or
 - (2) The gasoline has a true vapor pressure, as stored, greater than 470 mm Hg (9.1 psia) and is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent.
- c. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days.
- d. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February, 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependant upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored gasoline be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used.

3. Permit Shield

Compliance with the terms of this Part XI(A) shall be deemed compliance with the requirement(s) of A.A.C. R18-2-710(B) through (E) for the Gasoline Storage Tank 11.

[A.A.C. R18-2-325]

B. Diesel Storage Tank 12 and Alternate Diesel Storage Tank (20,000 Gallon)

The Permittee shall keep readily accessible records showing the dimension of each diesel storage vessel affected under this Part XI(B) and an analysis showing the capacity of the storage vessel. The records shall be kept for the life of the storage vessels.

[40 CFR 60.116b(a) and (b)]

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ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No. 1000045
For
Chemical Lime Company, Nelson Lime Plant

Table C-1. Process and Air Pollution Control Equipment Description

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
LIMESTONE CRUSHING SCREENING OPERATIONS: REQUIREMENTS IN ATTACHMENT B, SECTION III (SEE FIGURE E-1 OF ATTACHMENT E)						
Dump Hopper	ua	ua	ua	ua	ua	720
Apron Feeder 102	ua	ua	ua	ua	ua	720
Cleanup Belt Conveyor 102B	ua	ua	ua	Pre-1983	ua	720
Grizzly 102A	ua	ua	ua	ua	ua	720
Jaw Crusher 103	KVS	48" X 60" Jaw	554-P-73	1973	Maximum: 1260	720
Belt Conveyor 104	Hi-Line	42"	ua	Pre-1983	Rated : 600	720
Primary Screen 108	Symons	GP2820	GP-8153	1999 with screen made in 1980	Rated: 1100 Maximum: 1400	720
Surge Bin 107	66078	60 Ton	Unit 107	1973	600 rated and 1400 maximum	720
Belt Conveyor 235	ua	ua	ua	Pre-1983	ua	720
Belt Conveyor 215	ua	ua	ua	Pre-1983	ua	720
Vibrating Feeders 216-1, 2, 3	FMC	42" x 72"	ua	Pre-1983	ua	720
Vibrating Feeder 201	FMC	36" x 60"	ua	Pre-1983	Rated: 550	720
Belt Conveyor 217	Hi-Line	42"	ua	Pre-1983	ua	720
Vibrating Screen 218	Tyler	F-1406-X, 6'x16'	Unit 218	1977	850 rated and 1050 maximum	720

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Gyratory Crusher 219	KVS	1752	892-P-76	1977	500 rated and 910 maximum	720
Belt Conveyor 224	Hi-Line	30"	ua	Pre-1983	ua	720
Belt Conveyor 202	Hi-Line	42"	ua	Pre-1983	ua	720
Belt Conveyor 222	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 220	Hi-Line	24"	ua	Pre-1983	ua	720
Vibrating Screen 203	Tyler	F-900, 6'x16'	Unit 203	1973	600 rated and 1260 maximum	720
Gyratory Crushers 206 (2)	KVS	1752	557-P-73	1973	650 rated and 1050 maximum (each crusher)	720
Belt Conveyor 204	Hi-Line	30"	ua	Pre-1983	ua	720
Belt Conveyor 207	Hi-Line	30"	ua	Pre-1983	ua	720
Vibrating Screen 205	Tyler	F-900, 6'x16'	Unit 205	1973	650 rated and 1050 maximum	720
Belt Conveyor 208	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 209	Hi-Line	24"	ua	Pre-1983	ua	720
Chat Silo 210	KVS	500 Ton	Unit 210	1973	700 maximum	720
Belt Conveyor 225	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 226	ua	ua	ua	1999	ua	Subpart OOO
Supersacks Fill Operation	ua	ua	ua	ua	ua	720
Dust Collector 240A	Pneumafil	2-PKE-12BV	ua	ua	99% rated efficiency and 5000 cfm flow rate	n/a
Dust Collector 240B	Pneumafil	2-PKE-12BV	ua	ua	99% rated efficiency and 5000 cfm flow rate	n/a

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Dust Collector 234	Pneumafil	PCFH 284	ua	ua	99% rated efficiency and 6000 cfm flow rate	n/a
Dust Collector 213	Mikro-Pulsaire	64-S-8-20B	ua	ua	99% rated efficiency and 1080 cfm flow rate	n/a
SOLID FUEL HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION V (SEE FIGURE E-4 OF ATTACHMENT E)						
Track Hopper	ua	ua	ua	1973	ua	716
Solid Fuel Hopper	ua	ua	ua	1973	ua	716
Track Hopper Fuel Bin 503	KVS	Double-type steel	#503	1973	ua	716
Feeders 504A, B	ua	ua	ua	1973	ua	716
Crusher 505	McLanahan	36"x18"	1400-73	1973	Maximum: 220 tph	716
Belt Conveyor 506	Hi-Line	24"	ua	1973	ua	716
Weigh Belt 504C	ua	ua	ua	2001	ua	716, uses coke only
Bucket Elevator 521	ua	ua	ua	1973	ua	716
Roll Crusher 522	KVS	36"x36" KVS	891-P-76	1973	Rated: 150 tph	716
Belt Conveyor 516	ua	ua	ua	1977	ua	Subpart Y
Belt Conveyor 514	KVS	24"	ua	1973	ua	716
Solid Fuel Bin 508	KVS	500 Ton Bin	#508	1973	ua	716
Weigh Feeder 601-1	Ramsey	10-301	ua	1973	within \pm 1/2% accuracy	716
Screw Conveyor 613-1A	Ft. Worth Steel	9"	ua	1973	ua	716
Screw Conveyor 613-1B	Ft. Worth Steel	9"	ua	1973	ua	716
Ball Mill 602-1	KVS	9' x 12'6"	ua	1973	Maximum: 34.5 tph	716
Classifier 604	KVS	ua	ua	1973	ua	716

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Solid Fuel Bin 517-2	KVS	650 Ton Bin	#517	1976	ua	Subpart Y
Weigh Feeder 601-2	Ramsey	10-301	ua	1977	within $\pm 1/2\%$ accuracy	Subpart Y
Ball Mill 602-2	KVS	10' x 10'6"	ua	1976	Maximum: 51.6 tph	Subpart Y
Classifier 2-604	KVS	ua	ua	1976	ua	Subpart Y
Dust Collector 527	Mikro-Pulsaire	100S-10-0	ua	ua	99%+ rated and operating efficiency and 6,050 cfm flow rate	n/a
LIMESTONE KILN FEED SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION IV (SEE FIGURES E-2 AND E-3 OF ATTACHMENT E)						
Vibrating Feeders 301 (6)	FMC	32" x 48"	ua	1976	ua	722
Belt Conveyor 302	na	na	na	1973 extended 1977	ua	722
Vibrating Screen 328	Tyler	R-1005-CS-G	ua	1997	Rated: 100 tph Maximum: 393 tph	Subpart OOO
Weigh Belt Conveyor 329	Hi-Line	24"	ua	1973 extended 1977	ua	722
Stone Bin 304-1	KVS	800 Ton Bin	#304-1	1973	n/a	722
Weigh Belt Conveyor 303A	Hi-Line	24"	ua	1977	ua	722
Stone Bin 304-2	KVS	700 Ton Bin	#304-2	1976	n/a	722
Supersack Load-in Hopper	ua	ua	ua	ua	ua	722
Tube Conveyor	ua	ua	ua	ua	ua	722
KILN 1 SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VI (SEE FIGURE E-2 OF ATTACHMENT E)						
Preheater 305	KVS	ua	001	1973	ua	730
Lime Kiln 1 (quicklime production)	KVS	15' dia. x 155'	ua	1973	Rated: 33.3 tph Maximum: 39.4 tph	720

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Contact Cooler 310-1	Ferenco	Knimes	#310-1	1995	Rated: 33.3 tph Maximum: 39.4 tph	730
Kiln 1 Dust Bin 318-1	KVS	50 Ton Bin	#318-1	1973	ua	730
Screw Conveyor 313A-1	ua	ua	ua	1973	ua	730
Screw Conveyor 313A-2	ua	ua	ua	1973	ua	730
Screw Conveyor 313A-3	ua	ua	ua	1973	ua	730
Screw Conveyor 313B	ua	ua	ua	1973	ua	730
Screw Conveyor 316A	Ft. Worth Steel	12"	ua	1973	ua	730
Screw Conveyor 316	Ft. Worth Steel	12"	ua	1973	ua	730
Screw Conveyor 318	Ft. Worth Steel	12"	ua	1973	ua	730
Bin Elevator 317	ua	ua	ua	1973	ua	730
Kiln 1 Multicyclone 319	Research-Cottrell	CY-119	ua	ua	50-75%+ rated and operating efficiency and 220,000 cfm flow rate	n/a
Kiln 1 Gravel Bed 313	Rexnord	5/5DB 110/90 (10 Cell Gravel Bed Filter)	ua	ua	80-90%+ rated and operating efficiency and 180,000 cfm flow rate	n/a
Kiln 1 Dust Collector 1-321	Mikro-Pulsaire	365-8-30B	ua	ua	99%+ rated and operating efficiency and 1,740 cfm flow rate	n/a
KILN 2 SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VI (SEE FIGURE E-3 OF ATTACHMENT E)						
Kiln 2 Preheater	KVS	ua	ua	1976	ua	730
Lime Kiln 2 (quicklime production)	KVS	17' dia. x 178.5'	ua	1976	Rated: 41.7 tph Maximum: 59.0 tph	720

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Contact Cooler 310-2	KVS	20' dia.	#310-2	1976	Rated: 41.7 tph Maximum: 59.0 tph	730
Kiln 2 Dust Bin 318-2	KVS	150 Ton Bin	#318-2	1976	ua	730
Screw Conveyor 2-316	Ft. Worth Steel	9"	ua	1976	ua	730
Screw Conveyor 2-316A	Ft. Worth Steel	9"	ua	1976	ua	730
Screw Conveyor 2-316B	Ft. Worth Steel	12"	ua	1976	ua	730
Screw Conveyor 2-316C	Ft. Worth Steel	16"	ua	1976	ua	730
Screw Conveyor 2-316D	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316E	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316F	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316G	ua	ua	ua	1998	ua	730
Bin Elevator 2-317	Rexnord	1100 Series	ua	1973	ua	730
Kiln 2 Multicyclone 2-319	Cyclo-Trell	5x8 C-24	ua	1976	50-75%+ rated and operating efficiency and 280,000 cfm flow rate	n/a
Kiln 2 Negative Pressure Baghouse	Amerex	Rex-Pulse	10RP-14-324D6	1998	99.87% rated efficiency, 99.5% operating efficiency and 227,000 cfm flow rate	n/a
Kiln 2 Dust Collector 2-321	Mikro-Pulsaire	64S-8-20B	ua	1976	99%+ rated and operating efficiency and 3,100 cfm flow rate	n/a
FRONT (NORTH) LIME HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VII (SEE FIGURE E-5 OF ATTACHMENT E)						
Vibrating Feeders 340A, B, C, D (4 Feeders)	ua	ua	ua	1995	ua	730

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Vibrating Feeder 2-311	ua	ua	ua	1977	ua	730
Conveyor 411	ua	ua	ua	2000	ua	730
Apron Conveyor 420	Rexnord	24"	ua	1977	ua	730
Apron Conveyor 421	Rexnord	42"	ua	1977	ua	730
Screw Conveyor 413	Ft. Worth Steel	16"	ua	1977	ua	730
Roll Crusher 422	McLanahan	24"x48"	953045	1977	Maximum: 250 tph	730
Bucket Elevator 423	Rexnord	1100 Series	ua	1977	ua	730
Screen 432	Tyler	5"x14" 3S R-1405-X	50-2685	1976	Maximum: 195 tph	730
Undersize Lime Hopper	ua	ua	ua	1999	Maximum: 195 tph	730
Hammermill 422	ua	ua	ua	1999	Rated: 195 tph Maximum: 195 tph	730
Screw Conveyor 428	Purvis Bearing	20"	ua	1999	Rated: 150 tph	730
Bucket Elevator 424-1	Rexnord	1100 Series	ua	1977	ua	730
Bucket Elevator 424-2	Rexnord	1100 Series	ua	1977	ua	730
Bucket Elevator 424-C	Rexnord	1100 Series	ua	1977	ua	730
Screw 425	Ft. Worth Steel	24"	ua	1977	ua	730
Screw 426	Ft. Worth Steel	24"	ua	1977	ua	730
Screw 427	Ft. Worth Steel	24"	ua	1977	ua	730
Screw Conveyor 471	Purvis Bearing	9"	ua	1999	Rated: 10 tph	730
Screw Conveyor 470	Purvis Bearing	9"	ua	1999	Rated: 10 tph	730
Product Silo 1A (428-1)	KVS	3300 Ton Silo	428-1	1976	ua	730
Product Silo 2A (428-2)	KVS	3300 Ton Silo	428-1	1976	ua	730

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Product Silo 3A (428-3)	KVS	3300 Ton Silo	428-1	1976	ua	730
Vibrating Feeder 443-1	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-1 with Screen Cloth	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Vibrating Feeder 443-2	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-2	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Vibrating Feeder 443-3	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-3	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Screw Conveyor 441	ua	ua	ua	ua	ua	730
Screw Conveyor 461	Mesco Conveying Corp	UT 40-40-08	ua	1994	ua	730
Dust Recovery Bin	Silotek	16 Ton Bin	ua	1994	ua	730
Screw Conveyor 466	ua	9"	ua	1994	ua	730
Screw Conveyor 465	ua	9"	ua	1994	ua	730
Belt Conveyor 435	Hi-Line	42"	ua	1977	Rated: 600 tph	730
Belt Conveyor 434	Hi-Line	30"	ua	1977	Rated: 200 tph	730
Screw Conveyor 444	ua	ua	ua	ua	ua	730
Dust Collector 430	Mikro-Pulsaire	180S-8-20	ua	1977	99%+ rated and operating efficiency and 8,700 cfm flow rate	n/a

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Dust Collector 437A	Mikro-Pulsaire	25S-8-30	ua	1977	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a
Dust Collector 437B	Mikro-Pulsaire	25S-8-30	ua	1977	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a
Dust Collector 437C	Mikro-Pulsaire	36S-10-30	ua	1977	99%+ rated and operating efficiency and 2,178 cfm flow rate	n/a
Dust Collector 437D	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 437E	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 437F	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 419-5	Mikro-Pulsaire	16S-8-30	ua	ua	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a
Dust Collector 452	Pneumafil	PCFH-8BV	ua	1994	99%+ rated and operating efficiency and 1,500 cfm flow rate	n/a
Dust Collector 762-1	Pneumafil	PKE-24	ua	ua	99%+ rated and operating efficiency and 5,000 cfm flow rate	n/a
BACK (SOUTH) LIME HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VII (SEE FIGURE E-6 OF ATTACHMENT E)						
Rail Car Off-Load Hopper	ua	ua	ua	1973	ua	730

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Screw Conveyor 412	ua	ua	ua	1973	ua	730
Belt Conveyor 401	Hi-Line	24"	ua	1973	ua	730
Bucket Elevator 403	Rexnord	1612-02	ua	1973	Rated: 74 tph	730
Screw Conveyor 443	Conveyor Inc.	24"	ua	1991	Rated: 115 tph	730
Roll Crusher 444	McLanahan	24"x36"	903060	1991	Maximum: 250 tph	730
Screw Conveyor 445	Conveyor Inc.	24"	ua	1991	Rated: 115 tph	730
Bucket Elevator 446	ua	ua	ua	1991	Rated: 150 tph	730
Screen 404	Tyler	F-600, 4'x12'	20423	1973	Maximum: 250 tph	730
Hammermill 405	Williams	340R	15562	1998	Maximum: 98.3	730
Screw Conveyor 447	Conveyor Inc.	16"	ua	1991	Rated: 50 tph	730
Screw Conveyor 411	ua	ua	ua	2001	ua	730
Bucket Elevator 406 E, W (2 elevators)	Rexnord	1612-01	ua	1973	Rated: 40 tph	730
Screw Conveyor 408	ua	20"	ua	1994	ua	730
Screw Conveyor 408A	Thomas Conveyor	20"	ua	1994	ua	730
Screw Conveyor 408B	Thomas Conveyor	20"	ua	1994	ua	730
Screw Conveyor 408C	Thomas Conveyor	20"	ua	1994	ua	730
Hammermill 402-2	Williams	C-32 Slugger	14399	1992	Maximum: 98.3 tph	730
Product Silo 1	KVS	950 Ton Bin	#409-1	1973	ua	730
Product Silo 2	KVS	950 Ton Bin	#409-2	1973	ua	730
Product Silo 3	KVS	950 Ton Bin	#409-3	1973	ua	730
Product Silo 4	KVS	950 Ton Bin	#409-4	1973	ua	730

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Product Silo 5	KVS	950 Ton Bin	#409-5	1973	ua	730
Screw Conveyor 414-2	ua	ua	ua	1973	ua	730
Belt Conveyor 402	ua	ua	ua	ua	ua	730
Dust Collector 414	Mikro-Pulsaire	1F-2-48	ua	1973	99%+ rated and operating efficiency and 10,800 cfm flow rate	n/a
HYDRATOR: REQUIREMENTS IN ATTACHMENT B, SECTION VIII (SEE FIGURE E-7 OF ATTACHMENT E)						
Screw Conveyor 701	ua	ua	ua	1988	ua	730
Screw Conveyor 702	ua	ua	ua	1988	ua	730
Quicklime Feed Surge Bin 703	ua	3 tons	ua	1988	ua	730
Quicklime Belt Conveyor 704	Ramsey	Belt Scale System	Scale: 10-101R-1 Integrator: 2001	2001	Rated: 15.0 tph	730
4W Pulverizer 706	Mikro Pulverizer	4W	ua	1988	Rated: 20 tph Maximum: 22 tph	730
Screw Conveyor 707	ua	ua	ua	1988	ua	730
Pug Mill 708	Ehram	Twin Paddle	ua	1988	Rated: 20 tph Maximum: 22 tph	730
Seasoning Chamber 710	ua	18'x8' diameter	ua	1988	Rated: 12 tph Maximum: 22 tph	730
Screw Conveyor 712	ua	ua	ua	1999	ua	730
Bucket Elevator 719	ua	ua	ua	1999	ua	730
Air Separator 715	Sturtevant	Whirlwind 12'	3086	1999	Maximum: 25 tph	730
Hammermill 717	Williams Crusher Co.	Meteor Mill, Size 18	ua	1999	Maximum: 12.5 tph	730

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Screw Conveyor 718	ua	ua	ua	1999	ua	730
Bucket Elevator 713	ua	ua	ua	1988	ua	730
Hydrated Lime Silo 6	KVS	950 Ton Bin	#409-6	1973	Rated: 500 tons hydrated	730
Pilot System Storage Bin 1	Silotec	ua	ua	1998	ua	730
Pilot System Screw Conveyor 1	ua	ua	ua	1998	ua	730
Vibrating Mill/Seasoning Chamber (Pilot System)	ua	MD36X10	DP1449-1-1	1998	Rated: 13 tph Maximum: 13 tph	730
Pilot System Screw Conveyor 2	ua	ua	ua	1998	ua	730
Pilot System Storage Bin 2	Silotec	ua	ua	1998	ua	730
Ducon Scrubber 706	Ducon Wet Scrubber	UW-4(48)	ua	1988	95%+ rated and operating efficiency and 6,000 cfm flow rate	n/a
Dust Collector 714	Mikro-Pulsaire	36S-8-30	ua	ua	99%+ rated and operating efficiency and 1,740 cfm flow rate	n/a
Dust Collector 721	American Air Filter	Millennium	ua	1999	99%+ rated and operating efficiency and 10,000 cfm flow rate	n/a
DIESEL GENERATORS: REQUIREMENT IN ATTACHMENT B, SECTION X						
North Electric Generator	Diversified Technical Services	1150 EkW Generator	3516 DITA	1990	Rated: 1135 kW Maximum: 1135 kW	719
South Electric Generator	Diversified Technical Services	1150 EkW Generator	3516 DITA	1990	Rated: 1135 kW Maximum: 1135 kW	719

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
Portable Electric Generator	Rental	125 kW maximum capacity	Rental	1999	Rated: 125 kW Maximum: 125 kW	719

ua: Unavailable

n/a: Not Applicable

Table C-2. Stack Information

Stack ID	Description	Exit Temperature (°F)	Exit Velocity (fps)	Stack Height (ft)	Inside Diameter (ft)
1	North Generator Stack	855	245	13	1
100	Kiln 1 Stack	336	57.4	140	7.5
1-321	DC 1-321	100	58	45	0.8
2	South Generator Stack	855	245	13	1
200	Kiln 2 South Stack	420	48.2	141	10
213	DC 213	68	13.6	75	1.3
2-321	DC 2-321	100	54	66	1.1
234	DC 234	68	57	40	1.5
414	DC 414	90	34	125	2
762-1	DC 762-1	150	47	12	1.5
419-5	DC 419-5	100	32	8	0.9
430	DC 430	100	51	33	1.9
437A	DC 437A	80	27	40	0.9
437B	DC 437B	100	32	120	0.9

Stack ID	Description	Exit Temperature (°F)	Exit Velocity (fps)	Stack Height (ft)	Inside Diameter (ft)
437C	DC 437C	80	27	40	0.9
437D	DC 437D	80	62	26	0.9
437E	DC 437E	80	62	26	0.9
437F	DC 437F	80	62	26	0.9
452	DC 452	100	26	10	1.1
527	DC 527	80	40	90	1.8
714	DC 714	80	22	92	1.3
240B	DC 240B	68	47	40	1.5
240A	DC 240A	68	47	40	1.5
800	Ducon Scrubber	190	44	92	1.7
721	New Hydrator DC 721	115	55	42	1.8

Table C-3. Continuous Emission Monitoring Systems Information

Type	Manufacturer	Model	Serial No.	Range	Location
Kiln 1 stack opacity monitor	KVB	LM3086EPA3	730184	0-100%	Kiln 1 Stack
Kiln 2 stack opacity monitor	KVB	LM3086EPA3	730185	0-100%	Kiln 2 Stack

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**ATTACHMENT "D": DUST HOUSEKEEPING AND FUGITIVE DUST
EMISSIONS CONTROL PLAN**

**Air Quality Control Permit No. 1000045
For
Chemical Lime Company, Nelson Lime Plant**

I. INTRODUCTION

The purpose of this document is to specify the routine housekeeping procedures to be followed by Chemical Lime Company, Nelson, Arizona (CLC) to minimize fugitive dust emissions from the CLC Nelson facility. The procedures specified herein are designed to reduce fugitive dust emissions to the extent practicable and to comply with the fugitive dust control requirements of Paragraphs III.20-24 of Consent Order A-102-98 (September 28, 1998) between CLC and the Arizona Department of Environmental Quality (ADEQ).

For the purposes of this document, dust is defined as the accumulation of loose, aerosolizable process material.

II. FACILITY OVERVIEW

The Nelson facility consists of a limestone quarry and crushing plant, two rotary lime kilns with preheaters, a lime hydrator, truck loadout facilities, and rail loading and unloading facilities. A general site plan of the facility is presented in Figure D-1. For the purposes of this plan, the facility is subdivided into the following areas:

Quarry/Crushing Plant

1. Process Equipment
2. Dump Pocket
3. Haul Roads
4. Other Unpaved Roads
5. Open Areas

Lime Processing Plant

6. Paved Areas
7. Stone Processing
8. Coal System
9. Front Lime Handling System
10. Back Lime Handling System
11. Dust Modules
12. Dust Loadout
13. Preheaters Area
14. Baghouse Area
15. Electrical Substations
16. Plant Buildings

Each of these areas is delineated on Figure D-1. Details pertaining to the types and frequency of cleanup activities at each of these areas is presented in Section IV.

V. HOUSEKEEPING EQUIPMENT, METHODS, AND DUST DISPOSAL

CLC maintains the following equipment for the control of fugitive dust and for housekeeping procedures:

- # Street sweeper
- # Vacuum truck
- # Water truck

In certain plant areas, the use of the sweeper or vacuum truck is not practical. In these areas, dust is removed manually by broom and shovel. In addition, a loader is sometimes used to remove larger piles of material. In all of these activities, every effort is made to minimize the reentrainment of dust into the atmosphere. Air hoses are generally not used for dust removal, unless required for equipment maintenance or employee safety procedures. Water spray hoses are not used to remove loose dust.

All dust that is removed by housekeeping procedures is hauled to dust storage cells in the quarry.

I. DUST CONTROL AND HOUSEKEEPING PROCEDURES AND SCHEDULE

The dust control and housekeeping procedures are summarized in Table D-1. Specific details for each plant area are described below.

A. Quarry/Crushing Plant

The quarry/crushing plant operations are responsible for fugitive dust control on all quarry operations, crushing operations, and maintenance of unpaved roads including haul roads.

1. Quarry/Crushing Plant Process Equipment

Routine inspections of all crushing process equipment are made at least 5 times per week to determine whether any maintenance or cleaning needs to be performed. These inspections are documented on the Crushing Plant Inspection Sheet presented in Appendix D-A. Any areas requiring clean up are cleaned within 24-hours unless other plant maintenance or emergency situations require the immediate attention of plant personnel. In such cases, areas are cleaned as soon as practicable following the plant maintenance or emergency situation. The clean-up operations are also documented on the Crushing Plant Inspection Sheet. Cleaning is performed with shovels, brooms and a loader when larger accumulations exist.

2. Dump Pocket

The dump pocket to the primary crusher feed hopper is enclosed on three sides, and water spray bars are used to reduce fugitive emissions from haul truck dumping into the hopper.

3. Haul Roads and Unpaved Roads

Fugitive dust emissions from haul roads and all other unpaved roads are controlled by the application of water and chemical dust suppressants. A water truck is used to water the haul roads and

unpaved roads daily (when roads are in use) depending upon weather conditions. Magnesium chloride (or equivalent) is applied to the haul roads a minimum of 4 times per year. More frequent treatment with magnesium chloride (or equivalent) is conducted if weather conditions (heavy rainfall, high winds) reduce the effectiveness of the dust suppressants.

Application of water and/or dust suppressants is documented on the Vehicle Inspection and Production Report forms presented in Appendix D-A. A separate form is filled out for each water truck when operated.

4. Open Areas

The CLC Nelson facility is located in an area characterized by complex terrain and thus there are few open areas that are subject to possible disturbance by off road vehicle use. In addition, vehicle traffic at the facility is limited to the existing, treated roadways by the use of berms or natural topography. Open areas that do exist at the facility are vegetated by natural desert vegetation and have a natural surface crust that minimizes wind erosion potential.

B. Lime Processing Plant

The lime processing plant operations are responsible for fugitive dust control in and around all lime processing equipment, coal handling operations, product loadouts, paved areas, electrical substations (in the plant area), dust handling operations and plant buildings.

Unless otherwise noted below, the Kiln Round Sheets presented in Appendix D-A are used to document the routine inspections of the Lime Processing Plant areas. Areas that need to be cleaned are noted on these sheets. A supervisor reviews these sheets and assigns clean up tasks accordingly. The assignment of clean up tasks is also noted on the Kiln Round Sheets.

1. Paved Areas

Loose dust on all paved areas, as shown on Figure D-1, is removed at least 3 times per week using either the sweeper truck or the vacuum truck. This includes the areas under the kilns and silos 1-6 (back lime handling system), at the truck loadout and scales, and around the shop. Areas to be cleaned are noted on the Kiln Round Sheets.

2. Stone Processing

The catwalks and conveyors to and from the Chat Bin are cleaned at least 1 time per week using brooms and shovels. Loose, dry dust is placed onto the conveyor and mixed with process materials. Any wet material from in and around the rock tunnel is removed by wheelbarrow and shovels and then transported by loader to the low quality ore stockpile. Areas to be cleaned are noted on the Kiln Round Sheets.

3. Coal System

All catwalks and conveyors from the coal tunnel to the weigh belts and the top of the coal bins are cleaned at least 2 times per week using brooms and shovels. Areas to be cleaned are noted on the Kiln Round Sheets.

4. Front Lime System

Dust in and around the Front Lime System is removed at least 1 time per week using a combination of brooms, shovels, and the vacuum truck. This includes underneath and on top of silos 1A, 2A, and 3A. Areas to be cleaned are noted on the Kiln Round Sheets.

5. Back Lime System

Dust in and around the Back Lime System is removed at least 2 times per week using a combination of brooms, shovels, and the vacuum truck. The tops of silos 1-6 are cleaned at least 1 time per week with the vacuum truck. Areas to be cleaned are noted on the Kiln Round Sheets.

6. Dust Modules

The areas underneath and on top of the Kiln 1 dust modules are cleaned 1 time per week using shovels, brooms and the vacuum truck. Areas to be cleaned are noted on the Kiln Round Sheets.

7. Dust Loadout

The sweeper truck, vacuum truck, brooms and shovels are used to remove dust from underneath and around the dust loadout area at least 1 time per week. Cleaning is documented on the Kiln Round Sheets.

8. Preheaters Area

The areas underneath the preheaters to Kilns 1 and 2 are cleaned at least 3 times per week using the vacuum truck, loader, brooms and shovels. Areas to be cleaned are noted on the Kiln Round Sheets.

9. Baghouse Area

Dust underneath the Kiln 2 baghouse is removed 1 time per week using the vacuum truck, brooms, and shovels. Areas to be cleaned are noted on the Kiln Round Sheets.

10. Electrical Substations

Plant electrical substations are inspected 1 time per month and, if necessary, cleaned to remove loose dust from around the electrical transformers. Cleaning is performed using the vacuum truck, brooms and shovels. Areas to be cleaned are noted on the Kiln Round Sheets.

11. Plant Buildings

Accumulation of dust on plant buildings has not been a significant problem at the CLC Nelson facility. Accordingly, plant buildings are inspected 1 time per year and cleaned if necessary, when safety constraints permit, using the vacuum truck, brooms and shovels. Areas to be cleaned are noted on the Kiln Round Sheets.

II. MAINTENANCE OF RECORDS

All records related to fugitive dust control and dust housekeeping, as described in this plan, are retained in the plant office for a period of five years. These records include copies of the Crushing Plant Inspection Sheets, Kiln Round Sheets, pertinent Vehicle Inspection and Production Report forms and any other records necessary to demonstrate compliance with this plan. In addition to dust control and housekeeping requirements, the Crushing Plant Inspection Sheets, Kiln Round Sheets, and Vehicle Inspection and Production Report forms are used to document other items pertinent to the facility operation. Only the items pertinent to fugitive dust control and housekeeping are to be required under this plan.

III. PLAN REVISIONS

CLC may make revisions to this plan to reflect changes in facility operations, facility equipment, or the frequency and types of clean up activities. Such revisions will be submitted to ADEQ for approval prior to implementation of the planned changes.

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Figure D-1. Nelson facility site plan and dust control areas.

Table D-1. Summary of Dust Control/Housekeeping Procedures and the Minimum Control Frequency

Facility Area	Description	Dust Control/Housekeeping Procedures	Minimum Frequency	Recordkeeping
Quarry/Crushing Plant				
Process Equipment	On and under catwalks, conveyors, grizzly, aprons, jaw crusher, gyratory crushers, pan feeders	Shovels, brooms, loader	5 times/week	Crushing Plant Inspection Sheet
Dump Pocket	Dump Pocket to Primary Crusher Feed Hopper	To be enclosed on 3 sides and water spray bars.	Continuous when dumping	Crushing Plant Inspection Sheet
Haul Roads	Active haul routes on unpaved roads.	Water application. Magnesium Chloride (or equivalent) application.	Watered daily according to weather conditions when in use. Magnesium Chloride (or equivalent) applied at least 4 times per year as dictated by weather conditions.	Vehicle Inspection and Production Report
Other Unpaved Roads	All other unpaved plant roads not used as haul roads. Main plant road is maintained by CLC from the cattle guard (property boundary) into the plant.	Water application. Magnesium Chloride (or equivalent) application.	Watered daily according to weather conditions when in use. Magnesium Chloride (or equivalent) applied at least 4 times per year as dictated by weather conditions.	Vehicle Inspection and Production Report
Open Areas	All open areas.	Natural vegetation. Traffic restricted to roadways by berms or natural topography.	Berms maintained as needed.	None
Lime Processing Plant				

Facility Area	Description	Dust Control/Housekeeping Procedures	Minimum Frequency	Recordkeeping
Paved Areas	All paved areas under the kilns, around the shop, truck loadout, scale, under silos 1-6.	Material removed with sweeper and/or vacuum truck.	3 times/week	Kiln Round Sheets
Stone Processing	Catwalks and conveyors from Rock Tunnel to the Chat Bin.	Loose, dry material is placed on conveyor belt and transported to Chat Bin. Any wet material is removed by shovels and wheelbarrow to loader.	1 time/week	Kiln Round Sheets
Coal System	Catwalks/conveyors cleaned from coal tunnel to weigh belts, including the top of coal bins.	Manual cleaning with brooms/shovels.	2 times/week	Kiln Round Sheets
Front Lime System	Underneath and on top of silos 1A, 2A, 3A and underneath the Front Lime System	Vacuum truck, brooms/shovels	1 time/week	Kiln Round Sheets
Back Lime System	Underneath and on top of silos 1-6 and underneath the Back Lime System	Vacuum truck, brooms/shovels	1 time/week on top of silos, 2 times/week for all else	Kiln Round Sheets
Dust Modules	Underneath and on top of the Kiln 1 dust modules	Vacuum truck, shovels and brooms	1 time/week	Kiln Round Sheets
Dust Loadout	Underneath and around the dust loadout area.	Sweeper, vacuum truck, brooms, shovels.	1 time/week	Kiln Round Sheets
Preheaters Area	Underneath Kilns 1 & 2 preheaters.	Loader, vacuum truck, brooms, shovels	3 times/week	Kiln Round Sheets
Baghouse Area	Underneath Kiln 2 baghouse	Vacuum truck, brooms, shovels	1 time/week	Kiln Round Sheets

Facility Area	Description	Dust Control/Housekeeping Procedures	Minimum Frequency	Recordkeeping
Electrical Substations	Within substations and on transformers in the plant area.	Vacuum truck, brooms and shovels	1 time/month	Kiln Round Sheets
Plant Buildings	On top of plant buildings	Vacuum truck, brooms and shovels	Inspected 1 time/year, cleaned as safety constraints permit.	Kiln Round Sheets

APPENDIX D-A

SAMPLE RECORDKEEPING FORMS

ATTACHMENT "E": PLANT SCHEMATICS

**Air Quality Control Permit No. 1000045
For
Chemical Lime Company, Nelson Lime Plant**

This attachment includes the following process flow diagrams:

- Figure E-1. Process Flow Diagram of the Crushing and Screening Operations
- Figure E-2. Process Flow Diagram of the Kiln 1 System
- Figure E-3. Process Flow Diagram of the Kiln 2 System
- Figure E-4. Process Flow Diagram of the Solid Fuel Handling System
- Figure E-5. Process Flow Diagram of the Front (North) Lime Handling System
- Figure E-6. Process Flow Diagram of the Back (South) Lime Handling System
- Figure E-7. Process Flow Diagram of the Hydrator System